

*A Datapro Feature Report*

**All About Typing and  
Text Editing Systems**





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**All About Typing and  
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## Word Processing Systems

Present-day word processing systems trace their ancestry back to the lowly mechanical typewriter which revolutionized the office in the first decade of this century. Up until that time, office correspondence had been handled by manual, pen-and-ink copying. The typewriter allows an average typist to outperform the best copyist, and provided the prime impetus for the entry of women into the office labor force.

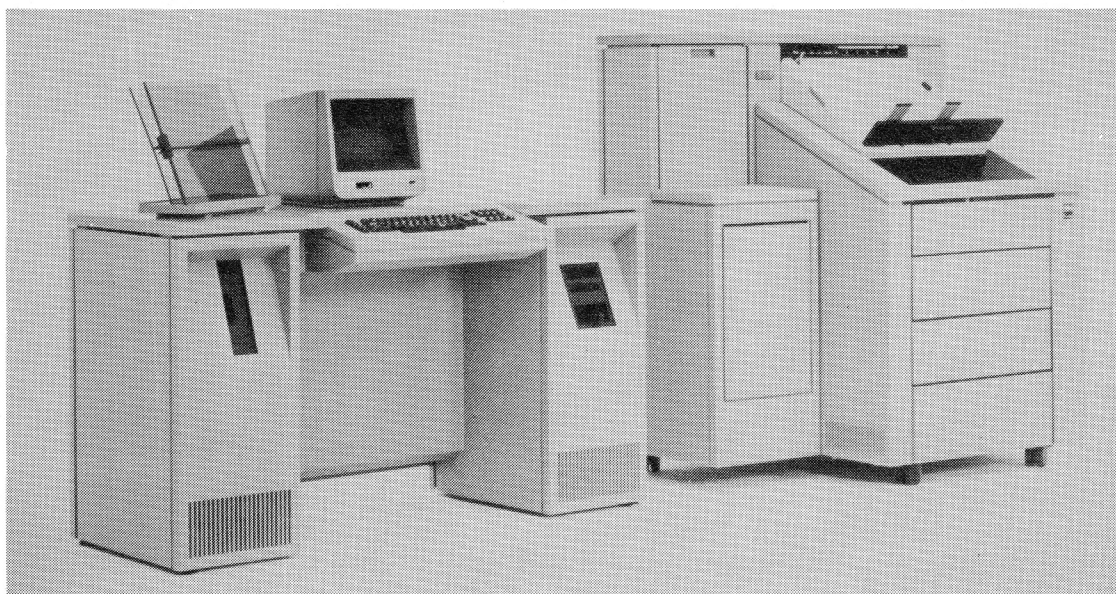
The next step in the evolution of word processing systems came with the introduction of automatic typewriters in the 1930s. These machines could repetitively type form letters and contracts, using a punched paper roller "storage" mechanism similar to those found on the player piano which was popular at the time. The automatic typewriter was enhanced in the 1950s by the addition of punched paper tape as a storage medium, and the addition of electromechanical machine logic which allowed switching between two tape reader/punches. These machines could be applied to repetitive tasks which also involved a degree of searching, selecting and merging text "stored" on the punched paper tape.

The availability of compact and relatively low cost electronics and new storage/recording media fostered the rise of computers in the late 1950s and early 1960s. Semiconductor diodes and transistors, and ferrite cores, drums and magnetic tapes began to replace cumbersome vacuum tubes, relays, and paper tape in processing systems. IBM coupled this technology with their then new Selectric typewriter in the design of the Magnetic Tape Selectric Typewriter (MT/ST). Introduced in 1964, this tape cartridge typing system ushered in the age of word processing.

Word processing systems are the glamour products in today's office equipment market. They can be considered as the first in a future line of systems that will revolutionize office operations with an impact similar to that of the computer on data handling tasks. The overall business climate in word processing also resembles that of computers in their heyday during the early sixties. The frantic pace is sustained by old and new word processing manufacturers continually introducing new models or system enhancements in an effort to gain a place in what will be the office of the future market. This Report details the features, parameters and pricing of nearly 100 word processors currently being sold by some 50-odd companies.

The first MT/ST models constituted an evolutionary advance over paper tape media automatic typewriters. Overall functional capabilities of both machine classes were almost identical. The MT/ST could, however, perform such functions with a higher degree of ease and speed. Magnetic tape can be erased and re-recorded; punched paper tape cannot. MT/ST tape is more "compact", having a storage density of about 20 characters per inch versus 11 characters per inch for paper tape. Present-day mag tapes have even higher storage densities. Magnetic tapes can be handled and stored more efficiently than paper tape, and transport search/retrieval speeds on typing systems are faster.

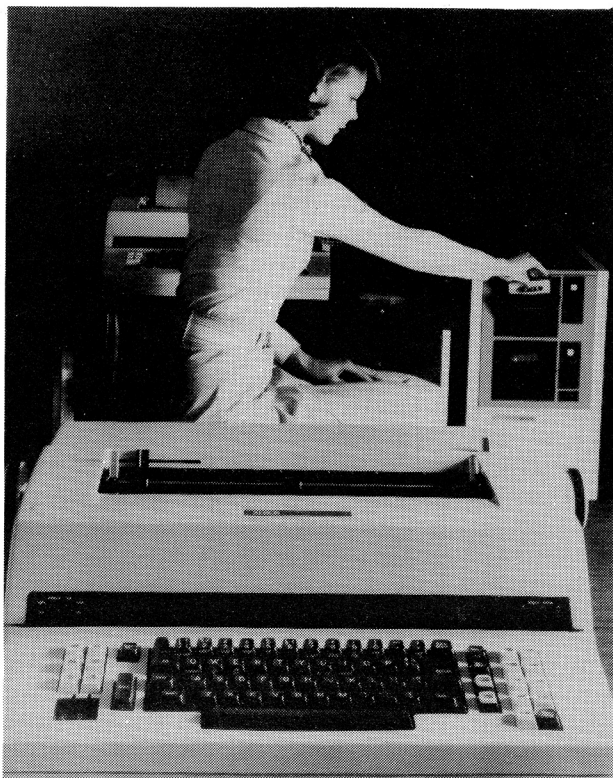
In 1969, five years after the first MT/ST models appeared, IBM introduced the Mag Card Selectric Typewriter (MC/ST) — a word processing typewriter that



IBM OS 6/450 Information Processor



## Word Processing Systems



**Xerox 800 Model 128 Electronic Typing System**

employed a reusable, page-recording, mag card medium. The page-orientation of this mag keyboard was easy for typewriter operators to conceptualize, and the MC/ST met with high acceptance. The popularity of this model made it the "norm" to which all other word processors would be matched. Two years later, Redactron introduced a line of mag card typewriters, and, along with Ty-Data, models that employed mag tape cassettes as a recording medium. Competition had started, and a new industry was born.

The 1970s have witnessed fast and furious activity in word processing. Lexitron and Linolex introduced the first video display systems in 1972. Concurrently, Comtek, ICS and LCS announced the first shared-logic, multi-keyboard computer systems dedicated to word processing tasks. Vydec became the first manufacturer to incorporate diskettes with a word processor in 1973. These technological milestones were coupled with the entry of many new companies into the market. The most prominent (not including those firms already mentioned) are Olivetti (1971); CPT and Wang (1972); Savin (1973); Royal and Xerox (1974); A.B. Dick, Lanier, Digital Equipment and Norelco (1976); and Addressograph-Multigraph and Dennison (1977). Over 50 firms are now involved in the direct marketing of word processing equipment in the U.S., with many more waiting in the wings with to-be-announced systems. The 100-odd word processors sold can be classed into two main categories — standalone word processing products and shared-logic word processing systems.

### STANDALONE WORD PROCESSORS

The basic standalone word processor consists of a keyboard printer (usually a modified Selectric typewriter) that is coupled with edit and control logic, internal memory, and a mag media recorder (card, cassette, tape cartridge or diskette). On such mag keyboard word processors the printer is used to generate text for editing operations as well as for final copy output.

The second type of standalone word processor replaces the keyboard printer with a keyboard video or CRT display terminal, and adds a separate printer (usually a "daisy" wheelprinter) to the basic configuration. Here text is keyed, edited and changed via the display before printout. The standalone video word processor may also (but not always) incorporate additional logic to enhance overall word processing power, and/or to provide arithmetic or data processing capabilities. The video standalone might also be software programmable, allowing the addition of new word/data processing features via mag media loaded program packages.

Video standalone word processors have internal or buffer memory systems capable of holding in excess of a display page of text. Such extra capacity allows lines to be scrolled through the display for edit, update and revision, and allows the addition of new text to a document file. Text is either called up into memory from files stored on mag media (cards, cassettes, etc.), or directly keyed.

Most (but not all) printer-only standalone word processors contain only a line buffer for internal memory. Exceptions with large buffer capacities employ such memory in lieu of an additional mag media station. Thus, a single mag card keyboard with extra buffer capacity in many instances can be more than a match for a dual card system with only a line buffer.

Buffers aside, dual media station (dual card, dual cassette, etc.) word processors have a degree more flexibility than their single media counterparts. Card-to-card, tape-to-tape or disc-to-disc operations are possible. New or revised text can be keyed and merged with existing files, printed and then stored. Address lists and special inserts can be combined with boilerplate on an automatic basis to generate "customized" form letters; new additions to such address lists may also be collated into a master card, tape, etc. Such tasks on single media word processors are performed in a less automatic manner, and usually require more direct operator intervention.

Optional peripherals offered on standalone word processors usually include communications and higher speed printer capabilities. A few printer-only standalones (CPT 4200 and Wang 1222) also offer limited display capabilities as an optional add-on feature. Whereas some video standalones provide full-page, 60-line or more viewable screen capacities and large internal buffers, only partial page or less capacities are provided by these add-on screens.



## Word Processing Systems

A standalone word processing typewriter without display capabilities can range in price from \$5,000 to over \$10,000. Standalone display models are necessarily more expensive, priced from \$10,000 to over \$20,000 — the higher priced exceptions sometimes offering data as well as word processing capabilities.

### SHARED-LOGIC WORD PROCESSORS

Shared-logic multi-terminal word processing systems are quite similar in concept to time-shared or key-to-disc computer systems common in the EDP industry. Such systems share the logic, storage and peripherals of a central computer amongst a number of keyboard/editing stations. Typically, a maximum of 12 stations may be supported by the processing power of a central mini-computer, although some shared-logic configurations may support 35 or more stations. High speed, computer-type printers (line, belt, matrix, electrostatic, etc.) are often employed by such systems, especially where first draft copy is required on an "instant" basis. Otherwise, printout is performed on one or more Selectrics or daisy wheelprinters. Operator input and editing is performed on Selectric or wheelprinter stations, on video display terminals, or on a combination of both. Other peripherals include OCR (Optical Character Reader) input; disc cartridge or pack storage; computer-compatible mag tape storage; mark or punched card readers; communications; photocomposer-compatible interfaces or punched paper tape output; and any other of the many devices that may be attached to a computer-controlled system.

Shared-logic systems may be attractive to users with high volume and/or long document text editing needs. Configured with a reasonable number of operator keyboard stations (usually four or more), and allowing provisions

for future system expansion, the shared-logic multi-terminal word processing system is also quite cost-effective. Such systems not only share the logic but also share the cost among a number of keyboard stations. Word processing power that might be cost-prohibitive on a single keyboard standalone system can be attractive when spread over a number of stations. Thus, shared-logic systems can provide greater control logic and edit capabilities, and larger on-line memory and storage capacities. Text can be stored, searched and retrieved as multi-page documents, maintaining page format and pagination throughout a number of updates and revisions. A number of word processing tasks may be performed almost simultaneously on a number of operator stations. Printout may be performed while text is being keyed or edited, a feature not too common amongst standalone word processors.

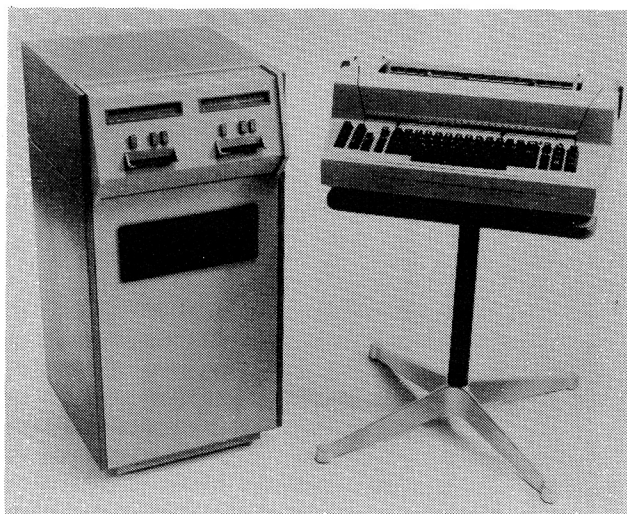
An intermediate "cluster" type of shared-logic word processor is available for users who find the concept attractive but presently lack the volume to justify purchase. Cluster systems are somewhat less expensive, but offer most of the text editing features inherent in a full-blown shared-logic system. The main limitations are the ultimate number of stations supported (usually four to six per cluster), and on-line storage capacities. The system is thus viable for users who require fewer stations on an initial or even ultimate installation basis. Clusters may even appeal to a high volume user who may wish to disperse tasks among a number of clusters rather than place them all on a single system. A system malfunction in this instance would not idle the entire word processing facility; only one cluster would be disabled rather than the entire shared-logic system.

Recently, some standalone system manufacturers have jumped onto the cluster bandwagon as a simple means to



Xerox/Daronics Visual Type 5400

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**Burroughs/Redactron Redactor Dual Card B**

enhance their own word processors. By sharing a single printer between two keyboard consoles, they have, in effect, configured a cluster with minimum cost expenditures to themselves and the end user. Such an arrangement, however, might be quite rudimentary, with the printer being switched to support one or the other keyboard station but not both simultaneously.

On first appearance, the cost of a multi-terminal, shared-logic word processing system might seem high. The true cost, however, must be measured on a per-station basis, and on the processing power extended to each station by the system. Price tags range from \$25,000 to over \$150,000, but the per-station cost is usually in the \$10,000 to \$20,000 range — similar to the cost of a standalone video word processor with which the shared-logic system usually competes.

### OTHER WORD PROCESSORS/ PROCESSING

The availability of time-shared word processing services from a number of vendors provides an alternative to (or a back-up for) internal user-owned equipment. Computer terminals or communicating word processors at the user site are employed to access the word processing power of a remote computer system via the telephone network. By sharing such power amongst a number of users, the time-shared service vendor can provide sophisticated functions at modest costs. A companion Report covers such services in more detail.

A new category of word processor employs a distributed logic concept. Outwardly much like a shared-logic system, distributed logic word processors disperse intelligence to the operator stations, the printers, the storage modules or other system peripherals rather than concentrating such intelligence at a central processor module. From the operator or user point of view, such dispersed systems function in a manner almost identical to a shared-logic system. However, since intelligence or power is dispersed, a malfunction would not necessarily shut down the entire system.

### GENERAL FEATURES

Word processing systems are able to produce printed output at speeds from 100 to 540 words per minute (wpm). In time-shared or shared-logic systems, a separate high speed line printer is often located at a central location and used for high volume work (direct mail labels, envelopes, form letters) at speeds often exceeding 20,000 wpm.

Depending upon the particular system, more than a dozen knobs, control buttons, switches and/or signal lights will be found on the basic keyboard console in addition to secondary edit functions piggy-backed onto many of the traditional typewriter keys. The typical word processing system can be operated by existing secretarial personnel after training sessions ranging in length from several hours to several days.

While it is true that word processors are often more efficient when operated by personnel who are machine-oriented rather than people-oriented, the most sophisticated equipment (in terms of features and functions) is often the easiest to operate and the fastest to learn. This seeming incongruity is explained by the tutorial devices included in many of the more sophisticated systems. Often, the operator need memorize only a few key commands initially, and the system will provide her with cues as to how to proceed and "menus", listing the options available at any point in the editing process. Other equipment manufacturers, mindful of the high costs of individualized training, have collaborated with training film vendors to produce self-training programs which the user may buy to train (and retrain) successive crops of operators.

Viewing or display screens have significantly improved the text editing I/O word processing cycle. Simple line displays eliminate the need for some intermediate hard copy output. Full-page displays offer the added advantages of allowing each page to be scanned in its entirety before storing or printing. Thus, the operator has control over complete page balance and appearance, as well as the ability to enter or delete text (character, word, line, paragraph, page) at will. The display also allows the printer unit to be separated from the keyboard. Other non-Selectric type printers using the "Daisy" wheel form of print element offered by Diablo or Qume can be employed; their disadvantage of having the typed line covered by the wheel element mechanism is alleviated by a page display screen.

It should be noted that IBM makes no provisions for quantity discounting on the Selectric mechanisms that are sold OEM. The non-IBM printer alternatives come with sizeable OEM or quantity discount prices. Thus, non-Selectric based systems may be marketed to the user at a lower overall price tag. Other advantages relate to the higher print speeds (up to 3 times faster) of some non-Selectric units.



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Full and partial page display capability can be found on standalone systems, shared-logic configurations, or time-shared systems. In general, a considerable degree of intelligence is needed to support the full page display capabilities of line roll up/down (scrolling), insertions/deletions within the middle of sentences, etc. In fact, the only disadvantage of the display-oriented systems (assuming that their higher cost is turned to good advantage through increased productivity) is that some of the systems can lose up to a full page during editing if a power failure is experienced before the page is stored.

By establishing separate job positions for correspondence and administrative secretarial personnel, improvements in efficiency through functional specialization can be achieved. A standard method of achieving this specialization has come to be the company-wide dissolution of the private secretary position in favor of a centralized word processing center plus one or more administrative support positions in locations near executive personnel requiring such service.

It should be noted that the concept of a word processing center need not involve a large number of secretarial personnel, but merely functional centralization. It is reasonable for a small office or for decentralized departmental areas within a large company to have a word processing center consisting of 1 or 2 persons. Thus, wholesale restructuring of an entire company's secretarial support with elimination of all personal secretaries is not necessarily required in order to initiate efficient word processing operations.

Beside the notion of dividing duties to conquer the workload, word processing also emphasizes the concept of professional supervision. Even without the use of automated equipment, having secretaries report to a single supervisor, whose main concern is efficient handling of the total secretarial workload, will have positive effects on productivity. When combined with the increased productivity attributed to the technology of automation, such increases can have a significant effect on the firm's cost saving efforts.

Another aspect of functional centralization into word processing centers is that the secretary, upon being freed from a direct employee-supervisor relationship with a particular principal, is now viewed as a professional and can compete directly with others for advancement without compensation and status being linked to that of a particular boss.

While a word processing center can operate to make the traditional office environment somewhat less personal, a key difference should be observed between word processing centers and the rather more old-fashioned secretarial pools. While the secretaries in a pool report to a single supervisor and are physically centralized as are personnel in word processing centers, each member's functions in a pool can continue to be general purpose in nature. Their equipment tends to be electric typewriters rather than newer automatic equipment, and when a principal requires dictation or other secretarial services the pool member is likely to leave the pool to work at the principal's location. In word processing centers the personnel will depend upon dictation or messenger services



Burroughs/Redactron Redactor II

## Word Processing Systems



IBM Mag Card/A (MC/A)

to obtain input material, and physically perform their secretarial typing support activities in the word processing center. Where non-typing administrative functions are required, the appropriate administrative secretaries can be used.

### APPLICATIONS

During the last ten years, the earliest and strongest advocates of word processing have been service-oriented companies who regularly manipulate paper, and who consider paperwork costs to be equivalent to a manufacturing organization's production costs. Such firms include insurance companies, banks, law firms, and administrative government agencies. The primary step in advancing the word processing concept to these firms was the development of automatic typewriters.

Based upon early piano roll player systems used to drive standard typewriters, service bureau automatic letter writing shops using automatic typewriters have been popular since the mid-1950's. Producing hundreds of personalized form letters per day, the typing system comes to a halt at specified places for the insertion of date, name, address, greeting, etc. Newer typing systems with magnetic recording media, internal memory, and visual displays have become available, extending applicability of the automatic typewriters to include merging of pre-recorded typed phrases, lines, and paragraphs; rough drafting to transcribe dictation onto magnetic media at high speed for subsequent error correction; and full-fledged text editing allowing for right margin justification (with support for hyphenation) or full line justification (all words ending evenly on right margin) with blank space insertions if necessary; and photocomposition equipment interfacing.

One of the strong differentiating elements between text editing systems is the degree of inherent hyphenation

capability. Many of the best hyphenation schemes are found in time-sharing systems or shared-logic systems where complex algorithms or dictionary lists of hyphenated words can be stored. On the other hand, the stand-alone systems generally have efficient if rather inelegant procedures available that use a "hot zone" or other warning condition to notify the operator (during attended operation) that intervention will be required to supply hyphenation as an adjustment to margin overflow situations.

Some systems allow the operator to hyphenate all multisyllable words with "ghost" hyphens which are used only when required. Other systems will remember that a hyphen was once used in a particular position and bring it back, if required, during a series of margin adjustments, with accompanying line-end changes. Hyphenation may also be provided just before printout, via a scan procedure; the system scans through text, stopping only where hyphenation decisions are required. The operator performs these hyphenations manually and the system continues to the next decision point. Depending on the hyphenation system used, the word processor will produce "tight" lines which allow text to be right-hand justified with a print-like appearance, or "loose" lines which cause too much white space during justification procedures, unless the operator manually intervenes. If a user has frequent requirements for justified text output, the hyphenation procedure used should bear careful inspection.

The most widespread office application for word processing systems continues to be typing of letters and memos. Lengthy text editing, statistical typing and pre-printed forms preparation continues to increase. These last two word processing applications are spreading outside the service-oriented companies who were the first to use the automatic typing equipment. Proposal-writing groups, purchasing offices, and accounting departments in a variety of companies (industrial, utility, transportation, shipping, and distribution firms) are now focusing attention upon this type of office automation.

With the advent of systems with records handling capabilities (such as the IBM Office System 6) word processing systems enter a new era where they will be assessed as administrative support systems as well as document handlers. When viewed from this prospective, such information processors will be cost-justifiable in a number of new environments, and will be employed innovatively, supporting many administrative tasks such as calendar, tickler files, file indexing, electronic mailbox, list and record maintenance, and so forth.

### ADVANTAGES

The main advantages of word processing, as implemented via automatic typing equipment, can be summarized as follows:



## Word Processing Systems

- increased office efficiency resulting in improved secretarial support for all executives and/or word originators;
- higher quality typed output based upon more advanced equipment;
- higher utilization of installed office machines;
- improved human resource utilization with better control and supervision of secretarial personnel through a word processing center; and
- greater career opportunities for secretaries and clerical personnel.

In particular, improved productivity is obtained by:

- reduced retyping time for error-free hard copy;
- facilitation of document revision/change;
- faster output typing speeds (to 450 wpm or higher);
- reduction in amount of proofreading required;
- leveling of peaks and valleys in an otherwise unpredictable workload when dictation equipment is used; and
- elimination of the retyping step for photocomposition input (when required).

As a consequence of these benefits, it has generally been found that a cost savings is possible. Secretarial/clerical payrolls are reduced through gradual attrition even

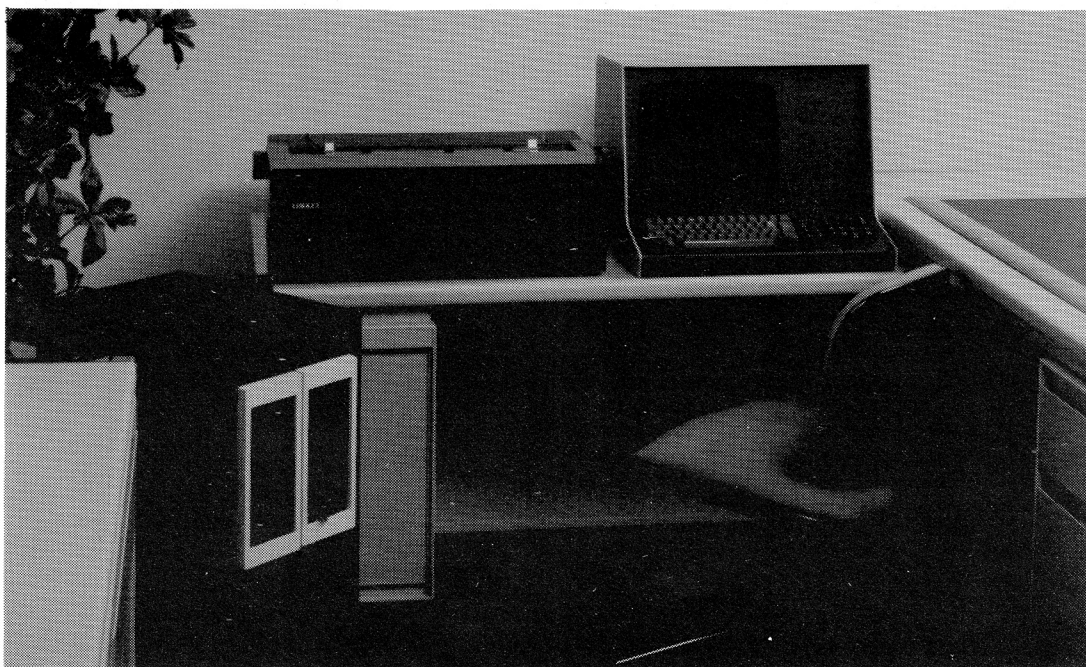
though remaining personnel will be paid somewhat more based upon their higher productivity.

For example, a secretary spending most of the day typing with an electric typewriter can produce about 50,000 lines of typing per year. A correspondence secretary using an automatic typing system can produce 150,000 or more lines per year. Industry estimates and recent studies showing four-fold increases in output productivity are not unusual; improvements of up to five times greater typing productivity per secretary have been obtained for complex text edit applications where many revisions must be made to lengthy documents. Furthermore, automatic typing systems tend to bring effective production within reach of even mediocre typists, although high-speed typists can push the system to its optimum by shortening the input cycle time for original keyboard entry.

Typed output for single-copy, error-free original correspondence (assuming a typical letter length of about 150 words) tends to be the area where the smallest productivity improvement is experienced — typically on the order of a less than two-fold increase. Where multiple originals are required, the productivity tends to increase dramatically. On the whole the chances of getting a significant improvement in productivity are great, with up to 85% of current word processing users reporting that their systems are cost effective and that they are pleased with the results.

### TRADEOFFS

Consider the example of a medium-sized office with a balanced workload of correspondence typing, text editing, and repetitive typing — typewriters used on a regular basis throughout the day. The output is assumed



3M/Linolex 4000 Video Text Editor

## Word Processing Systems



Wang Word Processor Model 10A

to be 150,000 typed lines per year from three secretary/typists. The salary of each secretary is \$150 per week, amounting to a total labor expenditure of about \$23,000. Adding one-time typewriter equipment costs brings the total to about \$25,000.

A single secretary/typist with an automatic typing system will equal the output of a conventional three-secretary office. However, another secretary must be included to handle non-typing administrative duties. Total labor expenditures thus are about \$16,000. Adding automatic typing equipment costs gives a total of \$24,000. Thus, first year savings obtained with an automatic system amount to \$1,000 plus decreased employee benefit, overhead and training costs.

During subsequent years (following full payout of the equipment) the cost in the above example for the automatic system would be about \$5,000 per year less than that of the conventional system—based on salary differences only. This represents about a one-third decrease in office typing expense by virtue of using automatic typing equipment and specialization of function. The results illustrated will vary depending upon specific customer conditions, including daily hours of typewriter utilization, extent of text editing (revision) versus repetitive typing, length of individual documents, etc. As the mix of jobs shifts away from short one-time non-complex letters toward either heavier text editing or repetitive typing, the advantage moves more towards automatic typewriters, since the higher speeds and intelligence of the automatic systems can be employed to full advantage.

Note that the example shows how full amortization of the equipment can well occur within the first year. Also note that word processing systems have remarkably good resale/trade-in value.

Another example of relative cost tradeoffs can be found by the comparison of the cost-per-page for material typed on electric typewriters versus that produced using automatic equipment. Costs are about one-third less per page for automatic systems. Current studies indicate that typical (1-page) non-automatic letter production costs range from \$3.25 to \$5.25 each. Thus, direct savings on correspondence typing of from \$1 to more than \$1.50 per letter can be realized, depending upon the dictator's salary and other associated overhead costs.

Other tradeoffs between automatic versus standard electric typewriters include the advantages of having output products (neat, error free originals or machine-readable media) that integrate well into other office operations. In the flow of office paperwork, another tradeoff can be lower consumable paper costs, particularly for the newer automatic typewriters using visual displays — either cathode ray tube (CRTS) or gas plasma displays (GASP's). In what appears to be a long-term paper shortage, such displays allow the entire document to be viewed in full-page format before transfer or printout onto paper. This reduces "paper mill" effects for intermediate or rough copy outputs.

For those systems with point-to-point communications interfaces, a whole new set of trade-offs can be made by comparing telephone transmission line costs with postage charges and the time value of immediate (hard copy) message transfer.

## THE MARKETPLACE

The word processor market is currently estimated to be \$500 million, with a current annual production rate of well over 50,000 units for a projected market size of \$5.5 billion by 1980. In general, the marketplace for word processors is understood to be the same as that currently addressed by electric typewriters. About 50% of the current 5 million installed typewriters today are in use more than 4 hours per day, making them prime candidates for automation. IBM is currently estimated to have at least 200,000 automatic typing systems installed (some industry sources put the figure as high as 300,000). All other vendors combined are estimated to have in the neighborhood of 100,000 units.

Conceptually, word processing is still a fledgling enterprise, struggling (albeit on a grand scale) for a user identity. A popular comparison has often been made between the word processing marketplace of 1974 and the computer marketplace of the late 1950's or early 1960's. In this climate, a variety of marketing approaches have been tried out by the word processing vendors.

Applying factory-type work measurement studies to the hitherto non-automated office, it was discovered that the traditional secretarial role could be viewed as consisting of two separate role could be viewed as consisting of two separate types of activity: *the administrative support*



## Word Processing Systems

function, concerned with non-typing work such as customer interface, filing, telephone handling, mail, reception, appointments/calendar, research, and record keeping; and the word processing or correspondence function concerned with typing, transcription, proof-reading, and editing.

### OUTLOOK

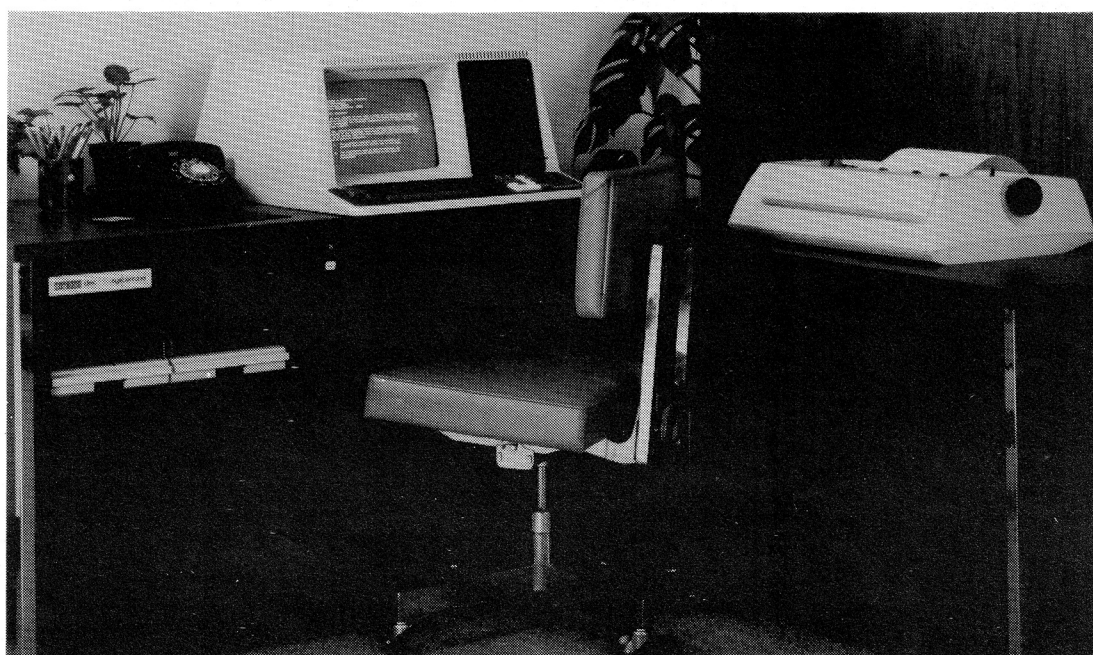
The future should see the introduction of word processing systems with increased self-contained intelligence and higher speed printout capabilities. Intelligence will increase system flexibility and simplify the handling of complex jobs. Higher output speeds will enhance overall system productivity.

One favorable sign is the availability of a wide variety of micro and minicomputers that may be imbedded in the typewriter console or used to control a centralized in-house time-shared network. Computational and data storage/retrieval capabilities will be incorporated into such "intelligent" systems.

Automatic letter preparation and personalization can involve commands to prepare and route letters to specific metropolitan areas or sales territories; to prospects with minimum gross sales volumes; to organizations having a certain number of employees; and to other entities based upon specific identifying/qualifying criteria. Inquiry/retrieval features can allow determination of the number and identity of business prospect for a given area or a given product. Dunning letters can be generated with a single operator command for overdue accounts, carrying an itemized list of unpaid items imbedded in the text of the letter.

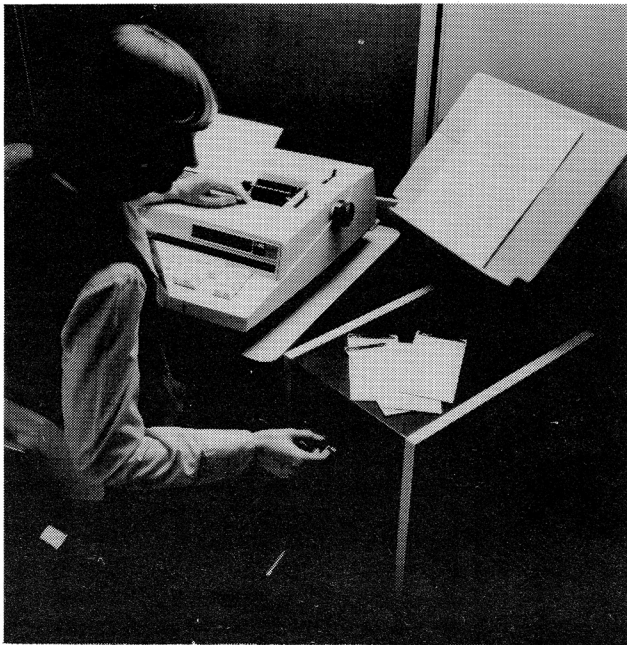
In addition to these "intelligent" features, interconnection to photo typesetting, optical character recognition (OCR), and other forms of processing/communications equipment should become commonplace.

When will all these space age feats of technological wizardry become available? In virtually every case, the capabilities are available now. No single system yet contains all of them, but some come rather close. Since IBM represents a nearly overwhelming presence in the automatic typing and text editing marketplace, the prospective user will probably ask which of these capabilities are offered by IBM. Until early 1977, IBM concentrated nearly 100 per cent of its efforts on the low-end, high-volume portion of the marketplace. Its announcement of the Ink Jet Printer (6640 Document Printer) and word processing capabilities for the System/32 presaged the coming of the Office Systems 6 in January 1977. This new line of word processing equipment includes formidable records processing and formatting capabilities, as well as sophisticated text editing, and the excellent paper handling abilities and high speed printout of the Ink Jet Printer. Good communications functions (and the ability to communicate to IBM Mag Card II equipment) were a part of this announcement. IBM now offers virtually a full line of word processing products from low-end Memory Typewriters and MC/ST's, through the new Office Systems 6 equipment, to the higher level capabilities offered by the WP/32 and onto such big computer software offerings as ATMS and STAIRS. This complete line should go a long way toward continuing to feed IBM's voracious appetite for customers; IBM can now offer word processing solutions from its own product line for nearly all types of customer environments.



Digital Equipment (DEC) 310W

## Word Processing Systems



A.B. Dick Magna I Electronic Typewriter

A number of other office system "giants" have also entered the word processing marketplace. In 1974, Xerox announced a series of higher-speed (30 cps) magnetic card and cassette based text editors, and in 1976 they announced communications capabilities for this equipment as an option. In 1975, Xerox also acquired Daconics, a California-based manufacturer of a successful shared logic system with a gas plasma display. Xerox has carefully staged their entry into the word processing marketplace, stressing the ability to service and support equipment by gradual marketing expansion.

Burroughs has joined the fray, via its acquisition of Redactron, Number Two in word processing sales (although a very long way behind IBM's Number One position). Redactron has a full line of mechanical standalone automatic typing and text editing equipment and announced a standalone CRT system, the Redactor II, at the Hanover Fair in Germany in May, 1976; this system is now being installed for first customers.

1976 also saw Digital Equipment Corporation, the IBM of the minicomputer business, enter the word processing business with a multiple function standalone CRT that combines data and word processing capabilities. A.B. Dick also entered word processing in 1976, with a mechanical standalone featuring a high-speed (45 cps) magnetic card system, designed to compete directly with IBM's popular Mag Card II system. Both of these firms claim that they have made major commitments to word processing, and see these initial announcements as just the start of a complete line of word processing equipment, addressing a variety of customer needs in a growing market. N.V. Phillips, the Dutch giant, announced a word processor from its Norelco group; shown at the 1976 Hanover Fair in three configurations, it was subsequently presented to the U.S. in a single, IBM mag

card-compatible design. It is anticipated that Norelco will offer both card and diskette versions in the U.S. this year.

Addressograph-Multigraph entered the word processing market in 1977 by adding the Display Text CRT system and the Easy Riter typewriter/cassette system (formerly manufactured and marketed by Ty-Data) to its Vari-typer division offerings. Dennison, a copier manufacturer and supplier of retail price ticketing equipment, has entered the word processing market by becoming the distributor for the Wordplex standalone display and shared logic systems. A number of other large firms will enter the word processing business during the next year or so, having decided that word processing is here to stay and that they can make a profit in this market. Most office systems organizations with large, in-place marketing forces from the size of this market and its potential for growth irresistible as an area for future expansion.

A large number of smaller firms have also made announcements in the past year or so, with many related to the area of standalone display systems. The display, especially the display paired with the random access floppy disc, is the current glamour item of the word processing industry, and further announcements in this area are to be expected. As display and microprocessor prices go down, the action in this area will heat up, until the ultimate survivors carve up the market among themselves. The final winners will likely be the giants of the industry, with their enormous resources; and those of the smaller companies who manage to identify and focus on special segments of the market, where extra support and customized service can buy them a continuing and profitable place.

### PLANNING CONSIDERATIONS

Before rushing on to the equipment comparison charts and selecting a typing system, it will be wise for the potential user to examine current operations. Emphasis should be placed upon typing and dictation activities for the purpose of evaluating and documenting:

- The nature and volume of present typing operations (extent of editing, multiple original generation, form letter preparation, etc.).
- The people engaged in typing and dictation activities.
- The ratio of secretarial time spent on typing/dictation functions versus administrative/non-typing activities.

Personal interviews with secretaries and the originators of documents to be typed, along with typing activity time logs should provide the raw data for the evaluation.

Rough typing volume guidelines would be to consider automatic typing systems when loads reach 100,000 line-per-year levels, or when labor costs directly related to typing reach the \$5,000 to \$10,000 level, as another low-end guideline.



## Word Processing Systems

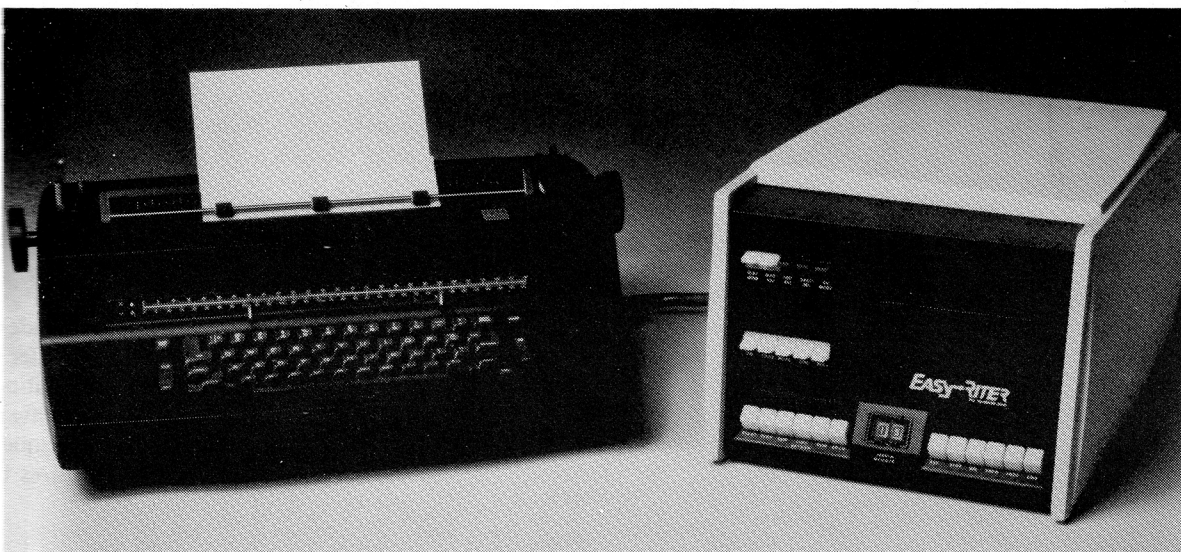


CPT Cassetype 4200

Based upon preliminary findings, a recommendation should be made to top management regarding the decision to commit to office typing automation. The chances for ultimate success rest largely on the initial commitment from top management to utilize word processing, and the personnel and procedures selected to implement their commitment. At one time, word processing meant the implementation of total word processing, throughout the company, in one or a series of word processing centers. This unilateral approach is no longer considered appropriate; generally the procedure is to look at office organizations and personnel, and select from a number of alternative models the one best suited to a particular environment. This could be the centralized word processing center, with a complete divorce between correspondence and administrative tasks. It is more likely, these days, that the appropriate choice will recognize some need for organization by department or

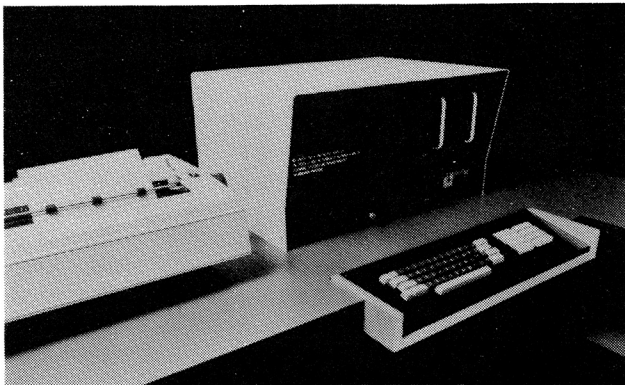
function, and the requirement to achieve added flexibility by having some secretaries who combine administrative and correspondence tasks, doing now one and then the other. The need for some executives to retain a personal secretary can also be recognized in this, more flexible and forgiving environment.

The best way to implement a word processing decision in a firm of any size is on a function by function or department by department basis. The first department to try word processing should be selected not only on the basis of the volume and nature of their workload, but also on the basis of attitudes toward word processing. It is vital to the future success of word processing within a company that the first installation be manned by enthusiastic personnel who will look on initial problems as interesting challenges, and who will insure that the company's first try is a real success. The limited size and scope of the first



AM/Varityper Easy-Riter 4200

## Word Processing Systems



NBI System II

installation allows the firm to develop good cost/performance data for subsequent comparison studies, and will also permit training personnel without disrupting the entire organization.

After the initial examination of non-automated activity has taken place and an area within the company has been selected for pilot application, selection of appropriate equipment can be made. It should be noted that some degree of re-organization for the secretarial function into typing (correspondence) versus non-typing (administrative) functions might be required; to some extent reorganization will be influenced by the specific nature and capabilities of the equipment selected.

Based upon the specific nature of the typing work, the activity level of the word originators (dictators), and the historical job stability of the secretarial personnel, a good initial feel for the complexity of the system to be selected can be obtained. For instance, if personnel turnover is high, the average skill levels are low and the typing requirements are simple, it makes little sense to install a complex minicomputer-based system that requires extensive operator training. Further, the user should limit his initial cash investment in new equipment to a minimum since the first systems brought in may not work out satisfactorily.

One good way to start out is the use of a time-sharing service which will generally provide the lowest possible entry costs while giving the operators a feel for the capabilities of automatic typing. In any event, the user should make an effort during the first year to remain flexible. The best way to do this is to rent his equipment. Even if the complete pilot program is a success, subsequent automation of other company areas can well call for a centralized in-house system.

After determining via the comparison charts (which make up the second half of this report) what automatic systems or services are best suited to the application, the potential user should then ascertain the quantity and quality of local support offered—perhaps the most significant factor in any evaluation.

Vendor support, particularly at this stage in the development of the automatic typing industry, is extremely important. Except for IBM, Xerox, and a few other large firms, the predominant nature of the word processing industry is for the manufacturer to sell through dealers and/or franchise agents. In most cases these dealers and agents are separate business entities who purchase equipment from the manufacturer for resale. Under these conditions, the reputation and soundness of the dealer is as important as that of the manufacturer. Often the need for careful appraisal can be even greater if the independent dealer arranges third-party lease financing. This effectively means that the user has purchased the system, and might be in sad shape if either the dealer or manufacturer refuses to back up the system with proper support. By careful checking with other users in his local area, and by adding self-protective clauses to the standard lease contract, the user can generally obtain a high degree of assurance that his interests will be protected.

Note that where the I/O typewriter is a Selectric-based unit, the vendor arranges service directly from IBM. Such service will be for the typewriter as a typewriter and not as a word processing system. Overall word processing system responsibility remains the problem of the vendor.

After the pilot installation has been running and initial problems solved, the cost/performance of the operation should be studied and compared against non-automated segments of the business. Only when performance is improved and costs reduced should the program be expanded. A good ball park figure for management to shoot for is an overall typing cost savings of about one-third. This figure is achievable within a year, and can be expected to improve with time as more cost effective equipment is introduced and as personnel became familiar with equipment and procedures.

### THE TABLES

The tabulations that follow present the features and characteristics of standalone and shared logic systems marketed by 50-odd vendors. For reader convenience, a full listing of these vendors or manufacturers, together with their headquarter addresses and telephone numbers is presented as a preface before the table entries.

The tabulations have been divided into two sections, relating to categories of automatic typing and text editing equipment. These categories are:

- **Standalone Word Processing Systems** include classic word processing "mag" keyboard or typewriter systems used for repetitive typing and text editing as well as standalone video display systems, configured with a display screen (usually CRT) and frequently including more sophisticated editing features than regular "mag" keyboard standalones.
- **Shared-Logic Word Processing Systems** are multi-terminal (station, keyboard, etc.) systems where each



## Word Processing Systems

terminal shares the word processing logic and power of a central minicomputer, as well as storage and peripherals. Included in this category are distributed logic systems which share peripherals and sometimes storage, but where computing power (logic) is dispersed among the individual stations or systems modules.

Charts for both categories of equipment are identical, except for the block of information headed "System Configuration."

**Company and Model** identifies the vendor/manufacturer, and the specific word processing system.

For Standalone Word Processing Systems, **Configuration** discusses the individual components (keyboard, display, printer, storage) of the system. **Memory Size** shows the size of the system's internal memory.

**Storage Medium** may be paper tape, magnetic cards, magnetic tape, magnetic disc, and/or internal memory. The paper tape systems can use either the standard 5 to 8 level punched paper tape (up to 1-inch wide), "edge-punched cards" (punched tape with a wide margin and perforated into 7-inch lengths), or a specially prepared rotating "piano roll."

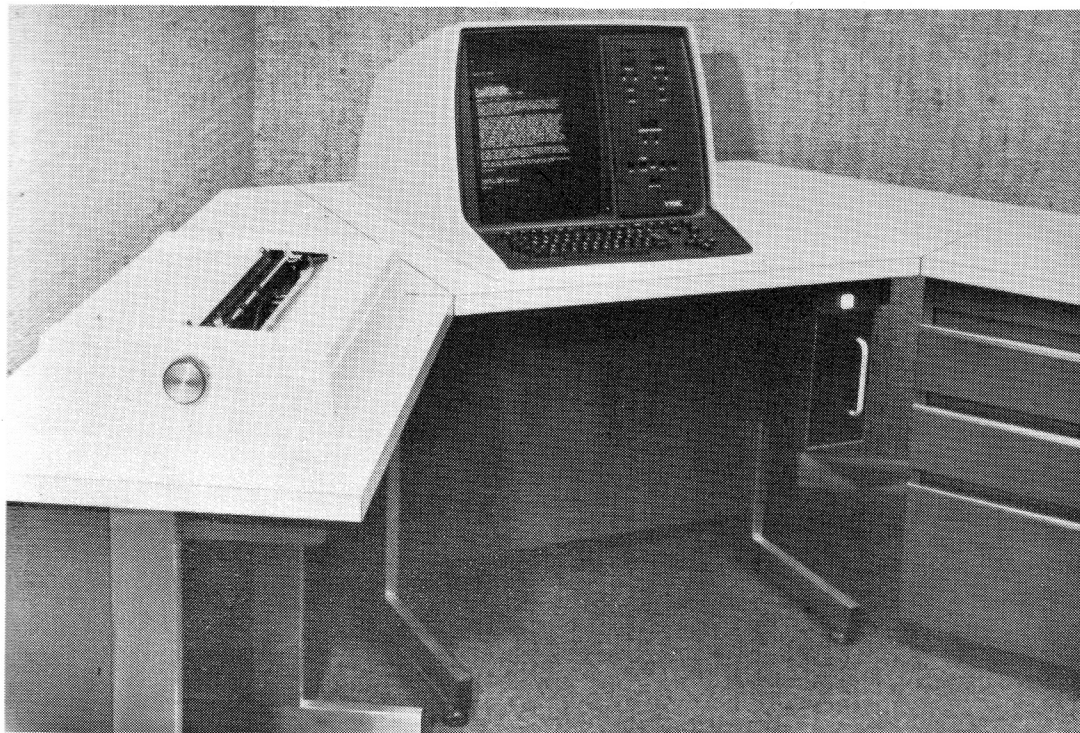
The magnetic card systems use an oxide coated mylar film cut to the same dimensions as the standard 3-1/4 by 7-1/8-inch punched paper card. Each magnetic card is normally associated with a separate typewritten page, but some of the more sophisticated systems can store more than one page per card.

Magnetic tape can be either the standard Philips-type cassette or any of a variety of tape cartridges. These cartridges range from IBM's 16-mm (5/8-inch) sprocketed tape (about \$20), to cassette (about \$3), to Olivetti's 1-inch wide 14-track endless-loop cartridge (about \$150). In all cases, the length of tape, data storage capacity, and cost of the tape must be considered carefully to determine true comparisons of cost-per-character for text storage. For some systems (usually those that are minicomputer-based) industry-compatible 1/2-inch open reel magnetic tape is also available.

Continuously rotating magnetic discs or diskette (floppy discs) can be used to provide rapid direct access storage for text on minicomputer-based (or sophisticated hard-wired) systems.

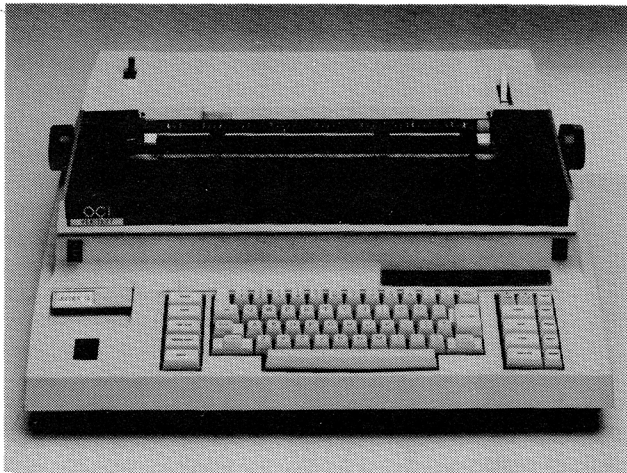
**Storage Capacity** describes the total amount of text which may be accessed by the system without changing media. A magnetic card system has about 5,000 to 10,000 characters "on-line." A magnetic tape would hold about 25 to 60 or more pages. Floppy discs hold about 250,000 to 300,000 characters; in many cases the word processor's operating system is also stored on the diskette, so about 60 to about 100 pages of storage are available. Discs can hold enormous quantities of data, frequently 2 million to 50 million characters or more on each disc.

For Shared-Logic Word Processing Systems, System Configuration includes **System CPU/Controller**, a description of the processor which is the brain of the system (frequently an off-the-shelf minicomputer); **CPU/Controller Memory** indicates the memory size.



Vydec/Exxon 1146 Text Editor

## Word Processing Systems



OCI Veritext

**System Storage Media** is generally diskette or disc, as described above, and includes the number of disc or diskette drives which the system may employ. Storage capacity describes the total amount of on-line storage per unit of media.

**File Organization** describes the manner in which files (text segments of paragraph, page, document, or other length) are arranged on the storage media.

**Number of Keystations Supported and Number of Printers Supported** describes the maximum size to which the listed system can "grow." In some cases, the maximum size applies to the entire systems, both keystations and printers; in other cases, there are individual limits.

The remainder of the table entries apply to both Stand-alone and Shared Logic systems.

**Display Station Features** include 20 parameters describing display function. They include: **Screen Size and Type** lists the physical dimensions of the video display and the variety of display employed. Most displays used in word processing are CRT's (cathode ray tubes, like a television set); a few systems utilize a gas plasma display or an LED (light emitting diode). The video display is intended to ease the job of accessing, managing, and editing text. Gas plasma displays are generally more costly than CRT's but offer sharper character definition. LED's are less flexible and generally have limited vocabularies.

The **Display Buffer Memory** is the size of the buffer which holds the characters displayed on the screen; this number may be larger than the number of characters actually displayed, to allow a partial-page screen to scroll through a page or more.

The screen **Format and Capacity** is the number of characters per line, number of lines displayed, and total capacity (in characters) of the screen. If the screen can also display in another format (such as wide lines), this screen format and capacity will be listed in a second line.

**Character Generation** describes the technique used by the display to create characters on the screen. If the technology employed is Dot Matrix (and it usually is), the size of the matrix is shown.

**Cursor Positioning** describes the motion of the cursor (a lighted position indicator, indicated by a blinking underline or a reversed character). Most systems employ a series of arrows for up, down, left, and right movement. Many systems use a Home key to position the cursor at the upper-left corner of the screen. A few systems also offer a Reverse Home to move the cursor to the lower-right corner of the screen. Some systems use code key plus alphanumeric or function keys for cursor movement.

**Vertical Scrolling** is the ability of the system to move vertically, a line at a time, up and down through a page or more of text. It allows text which will not fit on the display to be accessed for review of editing. Many systems have a display buffer (memory area) larger than the display; e.g., the screen might be 66 lines, while the display buffer holds (and may vertically scroll through) 99 lines.

**Horizontal Scrolling** is the ability of the system to move horizontally, along a line of text, to access more characters than may be shown on the screen at one time. Several methods may be used. The system can move horizontally, one character at a time, or it may display the text in left, center, and right segments, etc. Some systems display wide lines by condensing character size, so that a larger number of characters may be displayed.

**Page Scrolling** permits the system to "flip" through the pages of a document, usually in both forward and backward directions, to access all the text of a multi-page document.

**Display Highlighting** intensifies or blinks certain portions of the screen—either the characters themselves or the screen area behind the characters—to emphasize a text segment designated for some system activity such as delete or move.

Some display screens allow the operator to utilize **Character Size Control** to choose between a full-page of text at regular character size and one-half page at double (vertical) size. A few systems also allow the operator to view a double horizontal page (for wide-page work, such as tabular reports) at half-character size.

A few systems show **Character Pitch** (10-pitch or 12-pitch characters) or **Character Spacing** (proportional spacing); this means the line on the screen can be identical to the line to be printed. Most systems also show **Line Spacing** (typically 1, 1½ or 2 spaces) on the display.

**Line Justify Display** allows the video display to show line justification (even right-hand margin). Most display screens show this via interword spacing (extra "white" space between words). A few displays have a proportionally



## Word Processing Systems

standard character set, and can display justified lines of proportionally spaced characters, with justification occurring via intercharacter spacing.

Systems which show **Underscore Display** allow underscored characters to be displayed, or display codes to indicate that the material between the codes will be underscored on printout.

**Sub/Superscript Display** systems permit characters to be displayed above and/or below the line, or display codes to indicate that the material between the codes will be sub- or superscripted on printout.

Systems with **Multi-Column Page Display** have the ability to display text or numerics in multiple columns. The system may also have the ability to edit by vertical column.

**Stored Form Recall/Display** allows the system to store a form (such as text, lines, or a combination of both) and display it, permitting the operator to combine the form with keyboarded text. The system may also be able to store the form with text or to store form and text separately.

Some systems permit **Control Code Display**, showing instructions, commands, or codes on the video screen. In some systems, the operator may choose between displaying text with codes, or text only, as it will appear on printout.

**Format Statement Display** allows the operator to embed format information within text. The format statement may include such parameters as margin and tab settings,

decimal tab settings, centering instructions, paragraph indentations, line spacing, pitch size, etc. Some systems have an automatic format which is used whenever the operator fails to specify a format. Some systems allow only one format per document or per page. Other systems allow the operator to change formats (and automatically call up various formats), as desired. Some systems employ a format Menu instead of a format statement for the document. This is generally stored separately and displayed separately from the document itself.

The **Printer Stations Features** section of the tables lists twelve printer parameters, including:

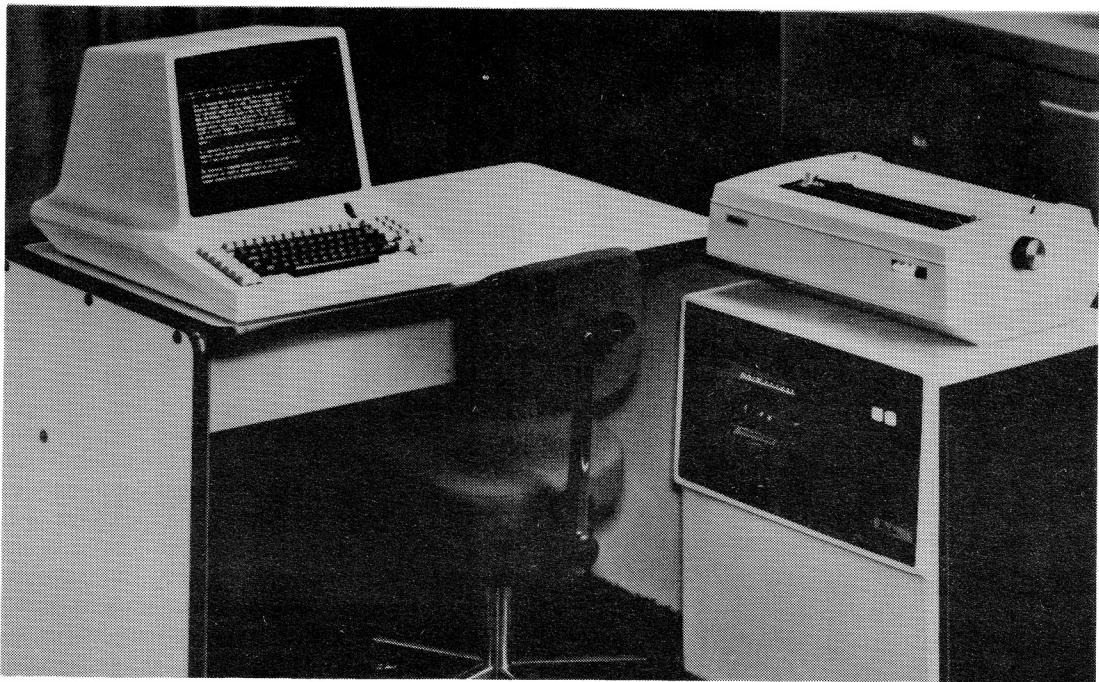
There are a variety of **Printers Types** used for word processing output (and also for input on non-video display systems), but the most commonly used printers are the Selectric typewriter and the Qume or Diablo daisy wheel printer. By far the largest number of installed word processors continue to employ the Selectric typewriter, either ordinary, off-the-shelf models, or the heavier duty model intended for use in word processors; such specially engineered units offer more durability and reliability; experience has proved that automatic typing systems attached to standard (non-heavy duty) typewriters are best employed where large volumes of automatic typing speed (generally 150 wpm) output will not occur. A number of vendors also employ the IBM Correcting Selectric and IBM Executive typewriter in word processing systems.

An increasing number of systems (the vast majority of non-IBM equipment) employ the newer daisy wheel mechanism, offering higher output speeds (30, 40, 45 or 55 characters per second) and a variety of typestyles.



Lexitron Videotype 942 Text Processor

## Word Processing Systems



Norelco WPS

In 1976, IBM introduced an ink jet printer, now available as both a standalone adjunct to mag card word processing systems and as the output mechanism for the new (1977) IBM Office Systems 6 (OS 6) series. This printer spits a stream of tiny, electrostatically charged ink drops at the page, as its head moves across the paper; print speeds range from 77 to 92 cps and output considerations allow for a variety of formats, type styles, and type sizes. Unique to this system is the ability to automatically access a choice of two types of paper plus envelopes. While there are limitations to the ink jet printer (no carbon copies, paper limitations, no masters), the printer has been received with enthusiasm and is likely to be imitated by other vendors within the next year or so.

Many word processing vendors also offer line printers, as the main system printer or an optional peripheral.

Some Printers have **Buffer Memory** offering a storage space for text between keyboard and printer.

**Character Pitch/Spacing** determine the appearance of final output. Most word processors offer 10 or 12 pitch (10 or 12 characters per inch) output, often both. Element printers (e.g., the Selectric and the daisy) offer a number of type styles as well. Some word processors also offer proportionally spaced printing fonts.

**Writing Line Width and Carriage Paper Width** limit the number of character printed on a horizontal line and the width of the paper. Maximum writing line width is usually two inches less than physical paper width.

**First Line Forms Advance** allows a system fitted with a forms feeding device to automatically advance to the top (first line) of the next form at the completion of a

document. This avoids the need to record keystrokes for multiple line advances.

**End-of-Page Stop** halts the printer at the end of a page for manual paper handling or font change.

**Justified Printout** permits the printer to produce output with an even right-hand margin. This may be achieved by interword spacing (leaving extra white space between words), or, with more sophisticated devices, via inter-character spacing, which provides output with a more print-like appearance, especially when a proportionally spaced font is employed.

**Sub/Superscript Printout** allows characters to be printed one-half space (occasionally one-fourth or one-third) above or below the typed line, allowing footnotes, chemical formulas and the like to be automatically printed.

**Non-Adjust Printout** permits the system to be instructed that a text section is to be output "as is," without margin or line length adjustment. It is used to protect tables and short lines such as addresses.

**Bidirectional Printout** (also known as bustrophendon printing) permits the system to print line 1 from left to right and line 2 from right to left, saving a little time by avoiding unnecessary carriage (or element) movement. A few systems which employ bidirectional printing will also check for the closest margin before deciding to print a line left-to-right or right-to-left; this can save a few seconds in printing immediately following a very short line.

**Simultaneous Printout** allows the system to print one document simultaneously while recording new text or revising previously recorded text. Some systems accept



## Word Processing Systems

only one page or one document at a time for simultaneous (also called background) printing; others allow a queue of documents to be created. If the system create a print queue, it may printout on a first-in, first-out basis, or it may allow the operator to make priority assignments.

**General Functional Features** includes nine system functions. **Media-Stored Format** is the ability of the system to allow format information (such as tab and margin settings, paragraph indentations, etc.) to be stored on magnetic media with the text, and to be used to format text on the display and/or during printout.

**A Default Format Statement** is information on margin settings, tabs, etc., stored for automatic implementation whenever the operator fails to designate a specific format statement.

A system which allows **Stored Multiple Formats** can store more than one format and access the desired format on operator command. Some systems have a formal routine for this operation; other systems do not, but can allow the operator to store a format statement on a special segment(s) of media and access it at will.

**Machine Dialog/Menu Prompt** is a system whereby a number of video display systems allow the operator to enter into a dialog or conversation with the word processor, so that operator actions are called for by the system in a question-answer mode. This type of dialog can be particularly useful in training new operators, or in helping part-time operators through a job. Some video systems offer **Menus** which list operator options at each step in the word processing process.

**Forms Input** allows the system to space automatically from field to field, with a carrier return or other single

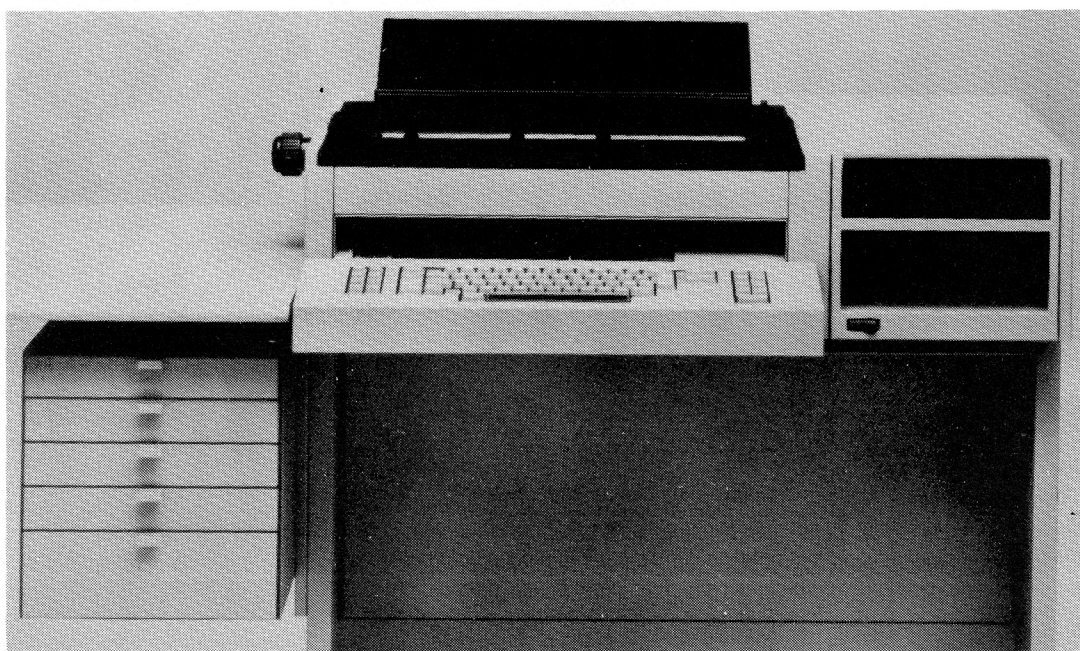
action, in filling in a prerecorded form. A few systems define fields as all numeric or all alphabetic, and reject incorrect entries.

**Control Character Printout** is the ability of the system to provide a printout showing all normally concealed control characters (required carriage returns, indent commands, etc.); line numbers may also be shown on such a draft printout.

**Printout Queuing** allows a number of documents to be lined up for subsequent printout while the operator goes on to perform other tasks. Such printout queuing may be quite primitive (only allows one page or one document at a time) or very sophisticated, with multiple print queues for each printer, and large documents or multiple documents permitted in the queue. Some systems also allow documents to be deleted from the queue and/or priority documents to be inserted ahead of their normal turn.

**Revision and Status Reporting** is a feature of some of the more sophisticated systems (generally display standalones and shared logic systems) allowing the system to automatically create an index, listing the documents stored on a tape, diskette, or disk. In some cases, the index may be used as a status report, and may show such entires as the date on which the document was created, the last date on which the document was accessed and/or revised, the number of revision accesses which have occurred, and so forth. Some systems can sort indexes by Author, Department, Operator, etc., before printing a status report.

A few systems provide some form of **System Security**, sometimes in the form of a key lock, generally in place of the on/off switch, to prevent unauthorized access to the word processing system. A few of the more sophisticated systems require the keying of a confidential password



Olivetti TES-501 Word Processor

## Word Processing Systems

before the system itself, or specific documents, are available for access or revision.

**Twelve Text Input Features** describe some of the techniques used by the operator in entering text on the word processor.

A system with **Auto Carrier Return** automatically performs a carrier return when the last word which will fit onto the line is typed. The system generally has a buffer to hold the word currently being typed, until it judges whether to place the word on the current line, or wrap it onto the next line. Systems which automatically perform carrier returns are speedier on input, since the typist may type text at a uniform speed without pausing at each line end for a return.

With **Auto Word Wraparound** the system automatically places a word which does not fit onto the line being typed onto the next line. Frequently combined with the Auto Carrier Return feature. Also used to denote systems which can wrap words during margin adjust procedures.

**Auto Margin Adjust** allows the system to perform margin changes either by automatically changing line endings without further intervention, or by allowing the operator to effect changes with a multi-step process (by line, by paragraph, etc.) During margin adjust procedures, temporary hyphens are normally dropped (unless they occur at the end of a line), and the system may give the operator an opportunity to make new hyphenation decisions to afford a "tight" line.

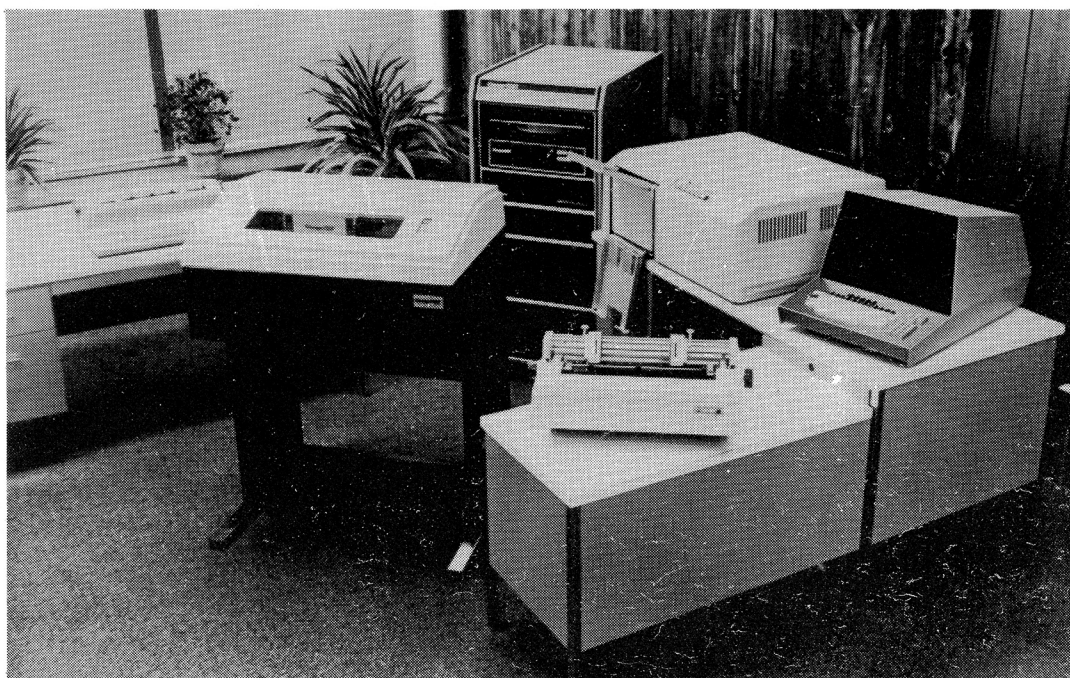
With **Temporary Margins**, the system has the ability to set a second, different margin for such purposes as an indented paragraph of quotation.

**Auto Decimal Tab** allows the system to automatically align columns of decimal figures on the decimal point. The typist can type numbers without regard for alignment, with the system performing the aligning chore.

**Hyphenation** describes the method the system uses to perform hyphenations. Options generally include manual hyphenation (operator picks hyphen position); Hot Zone (a space immediately to the left of the right hand margin, is defined and any word which will not fit on this line must be hyphenated within the Hot Zone) and; Scan (operator can go through material, with system stopping at any place where a hyphenation decision is required). Some systems perform no hyphenations, but wrap any word which will not fit entirely on one line to the next line (generally, the operator can override this wrapping and perform a manual hyphenation to maintain tight lines). More sophisticated systems may use an algorithm (formula) to make hyphenation decisions, or may store a dictionary of hyphenations and make hyphenations automatically.

**Auto Input Underline** allows the operator to indicate the beginning and end of an underline, rather than backspacing and underlining on a character-by-character basis. Some systems allow the operator to choose between underlining words only, or underlining spaces and words. A few use code that will underline the previous or next word, line, or other text segment.

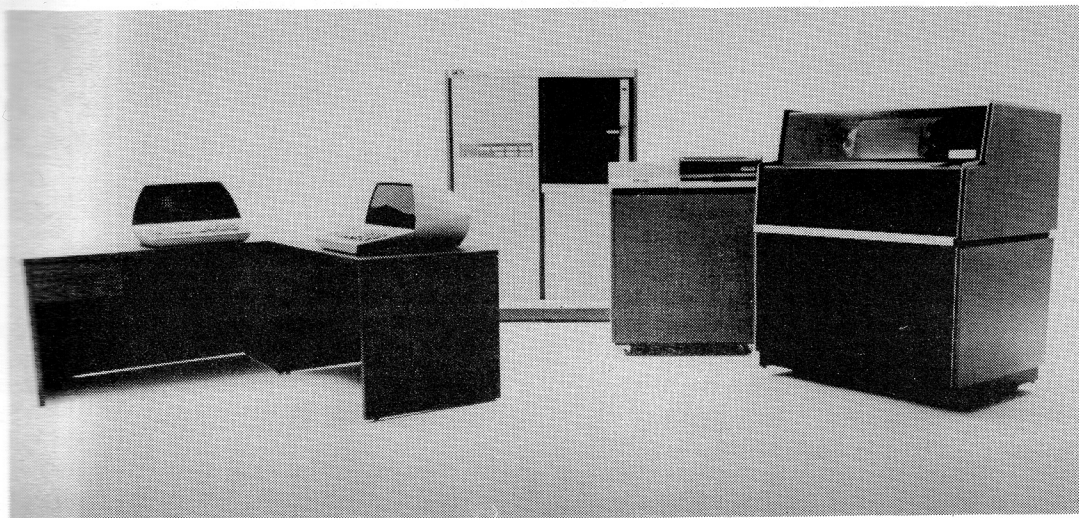
**Auto Centering** is the ability of the system to automatically center a word or text segment. This is usually implemented by a keystroke(s) that instructs the system to center the previous or next text segment. Text is usually centered between margins, but some systems center about a designated point. Also, some systems can center between



LCS CompuText



## Word Processing Systems



GC/S Datatext

tab settings, for centering column headings for tabular matter.

**Auto Line Spacing** allows word processing systems to permit different line spacings (single, double, triple, etc.) without performing physical setting changes on the printer. This enables the typist to input text with combinations of spacing without stopping and resetting the printer during playback printout.

**Auto Page Numbering** is a feature of some sophisticated word processing systems (some video display standalones or shared logic systems) enabling the system to automatically generate page numbers within documents. When text is rearranged and page numbers change, the system can generate a new set of correct page numbers. This feature enables the operator to input text without regard to final page endings. The system will create pages of the desired length, and number them appropriately.

**Auto Headers/Footers** describes the ability of a system to place header/footer text at the top or bottom of each page of a multi-page document. The operator specifies the text once and the header/footer (usually document title, company name or confidentiality requirements) is automatically added during printout. Changes may be made on the main document text without affecting the headers and footers.

**Auto Pagination** permits the word processing system to take a multi-page document and divide it into pages of a requested length (in numbers of lines). Often, such ability is joined with the capability to automatically generate page numbers.

**Under Text Edit & Merge Features** twelve ways of manipulating and accessing text are described. **Document Assembly/Merge** is a description of the way in which the system can assemble new documents from previously recorded text. Most systems can combine prerecorded text with keyboarded text. Many systems can combine selec-

tions from prerecorded text to form a new document. This heading also describes the system's ability to join a document to such variable information as names and addresses to create a number of nearly identical documents.

**Search Capability** describes the method by which the system searches for an editing point. Unsophisticated systems usually search by document, page, or paragraph number (reference code), or by line number. More sophisticated systems can also search by character string, for the first unique occurrence of some maximum number of characters.

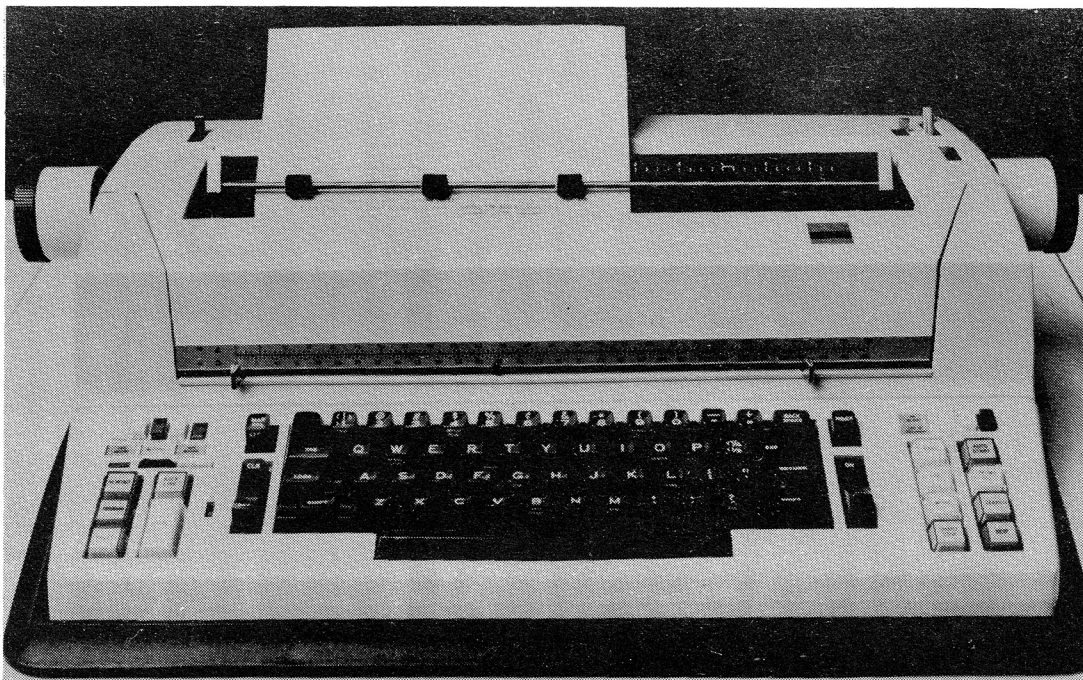
**Delete Capability** lists the grammatical segments of text which may be identified and deleted. C is Character, W is Word, L is Line, S is Sentence, P is Paragraph and Page is spelled out.

**Global Search and Replace** is a routine which many systems can employ to search for repeated occurrences of a character string (typically up to 32, 64 or 128 characters long). In some instances, the system can automatically replace all occurrences of one character string with another character string. In other cases, the system merely locates the string for operator selected deletion or replacement. A few high-powered systems can apply logical considerations to making the replacement.

**Block Move/Copy** is the ability of the system to designate a block of text (generally with some maximum number of characters, related to buffer size) and to move it within the document or to another document. Most systems which can access and move blocks of text can also copy blocks to another storage location (for editing) without erasing the original text.

**Column Move/Delete** is used to denote a system which can manipulate characters vertically, within a column. This feature is very important for tabular work, since a column can be moved or deleted with a minimum number

## Word Processing Systems



Wang System 1222

of commands. In less sophisticated systems, columns must be moved or deleted a line segment at a time, in multiple steps.

**Auto Repagination** is a routine employed by some systems to automatically change page endings if text is inserted or deleted within a document, or if a new page length is desired. Text will be removed from or added to pages, as required, to maintain page length.

**Auto Widow Adjust** is related to the Auto Repagination routines and describes the ability of the system to prevent the first line of a paragraph, or a title or heading from being the last line on a page. Such a feature is especially desirable if the system paginates or repaginates automatically.

**Auto File Sort** is the ability of the system to perform sorts on files, arranging them in alphabetical, numerical or other order. This feature is very important on systems that sort or manipulate address lists; such changes need not be performed in alphabetical order.

**Auto File Select** permits the system to make selections from data files, based on the characters which appear in a certain data field. For instance, using a zip code field, the system can select all the addresses with a 19101 zip code for forwarding one letter, and then send a different letter to zip code 19104.

Systems with **Auto Footnote Tie-In** allow footnotes to be tied to the appropriate text segment. If text segment is moved to another page or document, the footnote will travel with it. Generally, systems which are sufficiently sophisticated to offer footnote tie-in also automatically handle the division of space between the main text and footnotes.

**A Term Dictionary/Glossary** permits the system to store technical vocabulary or frequently used phrases (such as the corporate address, signature blocks, etc.) and retrieve them with a significantly smaller number of alphanumeric characters (usually two). This feature can greatly speed text entry with legal, medical, engineering and other applications with complex vocabulary or lots of boilerplate phrases. On systems which do not have this feature, but which do have a global search and replacement routine, it is possible to designate any single word or phrase with an "impossible" combination (say "qx") and then replace the combination throughout the document before storage or printout.

**Communications** discusses the **Availability** of a communications function (generally optional) and the **Format and Speeds** provided. Most word processors speak in different languages, so it is necessary to check this feature if inter-system compatibility will be required. A number of systems now offer a choice of formats and speeds and, in some cases, multiple formats and speeds, switch and keyboard selectable.

**Arithmetic Capability** describes the ability of a word processing system to also be used as a calculator or adding machine. A number of the more sophisticated systems have the ability to do arithmetic tasks; a smaller number can do such tasks as part of the word processing routines, with totals embedded in text, etc.

**EDP Capability** discusses three parameters which describe the system's abilities to be used for general data processing tasks. **Multiprogramming** describes the ability of the word processing system to simultaneously process different programs, such as file sorting and text editing. Systems with such capabilities can process much larger



## Word Processing Systems

quantities of material and are therefore, if properly used, more cost efficient.

**Compilers** are special software packages that translate a program language such as FORTRAN, COBOL, BASIC or PL-1 into machine level language. The presence of a compiler in the word processing environment generally means that the system employs a multi-purpose computer and that the manufacturer allows or encourages user programming.

**Applications Software** may be provided by the word processing vendor (or an independent supplier) to allow the user to perform other tasks with his word processing system, without having to write the additional software himself. Systems which offer such software are generally multipurpose computers and may or may not provide user programming capability.

**Peripherals** are devices (such as printers, OCR readers, and communications devices) which may be added to word processing systems as options to extend their capabilities. More sophisticated systems can frequently share a peripheral between multiple stations, making the use of a high-speed printer or other expensive piece of equipment cost-effective.

**Background Information** gives a few useful facts about the word processing system: its **First Delivery Date**,

**Country of Manufacture** (most systems are currently manufactured in the U.S., but manufacture in countries with abundant high technology industry, such as Japan, is likely to be occurring soon), and an **Installed Base Estimate**.

**Pricing and Terms** gives some basic information on the **Purchase** price for each system (where various configurations, e.g., multiple keystations or printers, etc., are available, the configuration priced is noted) as well as **Rental** and **Lease** pricing.

**Maintenance** gives information as to the provider of maintenance (generally the manufacture of the system, but occasionally a component manufacturer or a third party) and sometimes lists monthly maintenance costs. Where such maintenance costs are listed they generally apply to normal maintenance (preventive and emergency) during normal working hours.

**Warranty and Support** gives information on the length of the warranty period for newly purchased equipment and some information on support/training provided to users.

**Remarks & Other Features** is a catch-all category, appearing at the bottom of both pages of each chart. It gives the editor an opportunity to annotate entries and to provide comments and additional information of interest to the reader.





# Word Processing Systems Vendors

## *AM/Varityper*

Word Processing Department  
500 Wilson Boulevard  
Reston, VA (703) 525-1000

## *AES Data, Ltd.*

570 McCaffrey Street  
Montreal, Quebec H4T 1N1, Canada (514) 739-2711

## *Amer International Corporation*

Charleston Business Park  
3432 East Charleston Road  
Mountain View, CA 94043 (415) 321-3300

## *Automatic Electronic Systems — See AES Data Limited*

## *Avionic Products Engineering Corporation*

Ford Road  
Denville, NJ 07834 (201) 627-6207

## *Bae, Inc.*

457 Madison Avenue  
New York, NY 10022 (212) 421-4307

## *Bedford Computer Systems, Inc.*

Three Preston Court  
Bedford, MA 01730 (617) 275-0870

## *Burroughs/Redactron — See Redactron*

## *Comptek Research, Inc.*

445 Cayuga Road  
Buffalo, NY 14225 (716) 633-2400

## *CPT Corporation*

1001 S. 2nd Street  
Hopkins, MN 55343 (612) 935-0381

## *Daconics*

925 Thompson Place  
Sunnyvale, CA 94086 (408) 734-4800

## *Datapoint Corporation*

9725 Datapoint Drive  
San Antonio, TX 78284 (512) 696-4520

## *Data Terminals & Communications*

1190 Dell Avenue  
Campbell, CA 95008 (408) 378-1112

## *DEC — See Digital Equipment Corporation*

## *A.B. Dick*

Information Product Division  
2200 Arthur Avenue  
Elk Grove Village, IL 60007 (312) 593-8800

## *Digital Equipment Corporation (DEC)*

Word Processing Group  
Industrial Park Drive  
Nashua, NH 03030 (603) 883-8000

## *Edit Systems, Inc.*

1353 Main Street  
Ann Arbor, MI 48104 (313) 769-5720

## *General Computer/Systems, Inc.*

16600 Dooley Road  
Addison, TX 75001 (214) 235-5800

## *IBM*

Office Products Division  
Parsons Pond Drive  
Franklin Lakes, NJ 07417 (201) 848-1900

## *Information Control Systems, Inc.*

P.O. Box 281  
Ann Arbor, MI 48107 (313) 761-1600

## *Jacquard Systems*

2502 Broadway  
Santa Monica, CA 90404 (213) 829-3493

## *Lanier Business Products*

1700 Chantilly Drive, NE  
Atlanta, GA 30324 (404) 321-0911.

## *LCS Corporation*

31 Elm Street  
Springfield, MA 01103 (413) 781-6741

## *Lexitron Corporation*

9600 DeSota Avenue  
Chatsworth, CA 91311 (213) 882-5040

## *Linolex*

Subsidiary of 3M Company  
3M Center  
Saint Paul, MN 55101 (612) 733-1110

## *MCM Computers, Inc.*

2125 Center Avenue  
Fort Lee, NJ 07024 (201) 944-2737

## *Micom Data Systems Ltd.*

447 Saint Helen Street  
Montreal, Quebec H2Y 2K9, Canada (514) 288-8373

## *NBI*

5595 East Arapahoe Avenue  
Boulder, CO 80303 (303) 444-5710

## *Norelco/Phillips — See Phillips Business Systems*

## *Office Communications, Inc.*

766 Palomar Avenue  
Sunnyvale, CA 94086 (408) 739-2373

## *Olivetti Corporation of America*

500 Park Avenue  
New York, NY 10022 (212) 371-5500

## *Omnitext, Inc.*

P.O. Box 2090  
Ann Arbor, MI 48108 (313) 769-9202

## *Phillips Business Systems*

175 Froehlich Farm Boulevard  
Woodbury, NY 11797 (516) 921-9310

## *QI Corporation*

6 Duban Court  
Farmingdale, NY 11735 (516) 293-0700

## *Qualterm Terminals*

2007 O'Toole Avenue  
San Jose, CA 95131 (408) 263-7800

## *Redactron Corporation*

100 Parkway Drive South  
Hauppauge, NY 11787 (516) 543-8700

## Word Processing Systems Vendors

*Savin Business Machines Corporation*  
Columbus Avenue  
Valhalla, NY 10595 (914) 769-9500

*3M/Linolex — See Linolex*

*Trendata Corporation*  
610 Palomar Avenue  
Sunnyvale, CA 94086 (408) 732-1790

*Tycom Systems Corporation*  
26 Just Road  
Fairfield, NJ 07006 (201) 227-4141

*Ty-Data, Inc.*  
109 Northeastern Boulevard  
Nashua, NH 03060 (603) 889-1155

*Vydec, Inc.*  
130 Algonquin Parkway  
Whippany, NJ 07981 (201) 386-9191

*Wang Laboratories*  
836 North Street  
Tewksbury, MA 01876 (617) 851-4111

*Wordplex*  
31829 West La Tienda Drive  
Westlake Village, CA 91361 (213) 889-4455

*World Information Systems, Incorporated*  
17501 South Figueroa Street  
Gardena, CA 90248 (213) 532-6730

*Xerox Corporation*  
Office Systems Division  
P.O. Box 29466  
Dallas, TX 75229 (214) 630-2611

*XMark Corporation*  
1539 Superior Avenue  
Costa Mesa, CA 92627 (714) 646-7466□

# Standalone Word Processing Systems

The following tabulations cover the parameters, features and pricing of over seventy standalone word processing systems currently marketed by thirty-three different vendors. The table arrangement has been expanded into a two-page format to describe in more complete detail the overall characteristics of such systems.

The first or even-numbered pages cover System Configuration; Display Station Features; Printer Station Features; General Functional Features; and Text Input Features for each standalone system.

The second or odd-numbered pages continue the coverage of Text Input Features and also detail Text Edit & Merge Features; Communications; Arithmetic Capability; EDP Capability; Peripherals; Background Information; and Pricing & Terms.



## Standalone Word Processing Systems

COMPANY	AM/Varityper	AM/Varityper	AES Data	AES Data
<b>MODEL</b>	Easy-Riter*	Text Editor 424*	AES-90	AES-100
<b>SYSTEM CONFIGURATION</b>				
Configuration	Typewriter, cassette console	Keyboard/CRT, printer, integral desk	Keyboard/CRT, printer, diskette console	Keyboard/CRT, printer, diskette console
<b>Memory Size</b>	—	—	—	—
<b>Storage Media</b>	Cassette	Dual diskette	Diskette	Dual diskette
<b>Storage Capacity</b>	120K chars/cassette	156K chars/diskette	300K chars/diskette	300K chars/diskette
<b>DISPLAY STATION FEATURES</b>				
Screen Size & Type	Not Available	17" diagonal CRT	12" diagonal CRT	12" diagonal CRT
Display Buffer Memory	Not Available	—	63 or 95 lines	63 or 95 lines
Format & Capacity	Not Available	56 lines x 80 chars. (4480 chars. total)	24 lines x 80 chars. or 15 lines x 128 chars.	24 lines x 80 chars. or 15 lines x 128 chars.
Character Generation	Not Available	7 x 9 dot matrix	Dot matrix	Dot matrix
Cursor Positioning	Not Available	Up, down, right, left, home	Up, down, right, left, home	Up, down, right, left, home
Vertical Scrolling	Not Available	Standard	Standard to 95 lines	Standard to 95 lines
Horizontal Scrolling	Not Available	None	Up to 128 chars/line	Up to 128 chars/line
Page Scrolling	Not Available	Standard	None	None
Display Highlighting	Not Available	Standard	Flash	Flash
Character Size Control	Not Available	None	None	None
Character Pitch Display	Not Available	None	None	None
Character Spacing Display	Not Available	None	None	None
Line Spacing Display	Not Available	None	Standard	Standard
Line Justify Display	Not Available	None	Standard	Standard
Underscore Display	Not Available	Standard	Standard	Standard
Sub/Superscript Display	Not Available	Code only	Standard	Standard
Multi-Column Page Display	Not Available	None	Standard	Standard
Stored Form Recall/Display	Not Available	None	Standard	Standard
Control Code Display	Not Available	Standard	Standard	Standard
Format Statement Display	Not Available	Standard	Standard	Standard
<b>PRINTER STATIONS FEATURES</b>				
Printer Type & Speed	IBM Selectric 15 cps	Qume daisy 55 cps	Qume daisy 45 cps	Qume daisy 45 cps
Printer Buffer Memory	—	—	—	—
Character Pitch/Spacing	10, 12, 13"	10, 12, or proportional 15"	10 & 12 13"	10 & 12 13"
Writing Line Width	15.5"	15.5"	15"	15"
Carriage Paper Width	None	Standard	Standard	Standard
First Line Forms Advance	Standard	Standard	Standard	Standard
End-Of-Page Stop	None	Intercharacter spacing	Standard	Standard
Justified Printout	Standard	Standard	Standard	Standard
Sub/Superscript Printout	Standard	Standard	Standard	Standard
Non-Adjust Printout	None	Standard	None	None
Bidirectional Printout	None	Standard	Standard	Standard
Simultaneous Printout	None	Standard	Standard	Standard
<b>GEN. FUNCTIONAL FEATURES</b>				
Media-Stored Format	None	Standard	Standard	Standard
Default Format Statement	None	Standard	Standard	Standard
Stored Multiple Formats	None	None	None	None
Machine Dialog/Menu Prompt	None	None	Statusline on display	Status line on display
<b>Forms Input</b>	None	None	Standard	Standard
Control Character Printout	None	None	None	None
Printout Queuing	None	Standard	Prints from display buffer or diskette	Prints from display buffer or diskette
<b>Revision &amp; Status Reporting</b>	Status & error message lamps	—	—	—
<b>Security System</b>	None	None	Keylock optional	Keylock optional
<b>TEXT INPUT FEATURES</b>				
Auto Carrier Return	None	Standard	Standard	Standard
Auto Word Wraparound	None	Standard	Standard	Standard
Auto Margin Adjust	Optional**	Standard	Standard	Standard
Temporary Margins	None	Standard	Standard	Standard
<b>Auto Decimal Tab Hyphenation</b>	None 7-char. Hot Zone; operator insertion	Standard Stored algorithm	Standard Manual	Standard Manual
<b>REMARKS &amp; OTHER FEATURES</b>	*Formerly Ty-Data Easy-Riter 4500 **Tab & margin memory, \$100	*Formerly Display Text Editor		

## Standalone Word Processing Systems

AM/Varityper	AM/Varityper	AES Data	AES Data	COMPANY
Easy Riter	Text Editor 424	AES-90	AES-100	MODEL
	Standard	Standard	Standard	TEXT INPUT FEATURES(cont'd)
	Standard	Multiple lines may be centered simultaneously	Multiple lines may be centered simultaneously	Auto Input Underline
	Standard	Standard	Standard	Auto Centering
	Standard	Standard	Standard	Auto Line Spacing
	Standard	Standard	Standard	Auto Page Numbering
	Standard	Standard	Standard	Auto Headers/Footers
	Standard	Standard	Standard	Auto Pagination
Stored text merged with keyboarded text	Stored text assembled & merged with keyboarded text to form new document	Stored text merged with keyboarded text	Stored text assembled & merged with keyboarded text to form new document	TEXT EDIT & MERGE FEATURES
Reference codes & by missing C, W, L & P	By document name, page no. & cursor position C, L, P, Page & specified block	By document name, page no. & cursor position C, W, L, P, Page & specified block	By document name, page no. & cursor position C, W, L, P, Page & specified block	Document Assembly/Merge
	Standard; 29-char. max string	Standard	Standard	Search Capability
				Delete Capability
				Global Search & Replace
	Standard	Standard	Standard	Block Move/Copy
	None	None	Deletion or move across another column	Column Move/Delete
	Standard	Operator defines number of lines per page; document is paginated	Operator defines number of lines per page; document is paginated	Auto Repagination
	Standard	None	Standard; operator controls amt. forced	Auto Widow Adjust
	None	Alphanumeric sorts	Alphanumeric sorts	Auto File Sort
	None	Selection based on one field	Selection based on one field	Auto File Select
	None	None	Standard	Auto Footnote Tie-In
	None	None	None	Term Dictionary/Glossary
	Optional Asynchronous ASCII, IBM 2741-compatible; 110 to 9600 baud	Optional, \$1,800 Half-duplex, asynchronous IBM 2741 & 2780-compatible; 300 baud	Optional, \$1,800 Half-duplex, asynchronous IBM 2741 & 2780-compatible; 300 baud	COMMUNICATIONS
	None	None	None	Availability
	None	None	None	Format & Speed
	None	None	None	ARITHMETIC CAPABILITY
	None	None	None	EDP CAPABILITY
	None	None	None	Multiprogramming
	None	None	None	Compilers
	None	None	None	Applications Software
	OCR	—	—	PERIPHERALS
June 1975*	August 1976*	March 1974	—	BACKGROUND INFORMATION
USA	USA	Canada	Canada	First Delivery Date
40	40	300	—	Country of Manufacture
	\$13,990	\$17,400	Approx. \$19,000	Installed Base Estimate
	\$559 (12-mo.)	—	—	PRICING & TERMS
	\$337 (5-yr.)	\$400 (5-yr.)	—	Purchase
	\$60/mo.	\$55/mo.	—	Rental
	—	—	—	Lease
				Maintenance
				Warranty & Support
Will acquired the Ty-Dine Easy-Riter in March 1977.	*AM acquired the Display Text Editor in February 1977.			REMARKS & OTHER FEATURES

## Standalone Word Processing Systems

COMPANY	Artec	Base	Bedford Computer Systems	CPT
<b>MODEL</b>	Display 2000	Ultra-Text	Powertype	Cassette 4200 Series
<b>SYSTEM CONFIGURATION</b> Configuration	Keyboard/display, diskette console	Keyboard/CRT, CPU, printer	Keyboard/printer/ cassette console	Typewriter, cassette console
<b>Memory Size</b>	—	—	—	—
<b>Storage Media</b>	Diskette	Dual Diskette	Dual cassette	Dual cassette
<b>Storage Capacity</b>	256K chars./diskette	256K chars./diskette	144K chars./cassette	125K chars./diskette
<b>DISPLAY STATION FEATURES</b> Screen Size & Type	1" x 10" Gas plasma	5" x 10" CRT	Not Available	5" x 7" CRT*
<b>Display Buffer Memory</b>	None	—	Not Available	1024 chars.
<b>Format &amp; Capacity</b>	1 line x 37 chars. (37 chars. total)	24 lines x 80 chars. 1920 chars. total)	Not Available	14 lines x 96 chars. (1024 chars. total)
<b>Character Generation</b>	Dot matrix	7 x 9 dot matrix	Not Available	5 x 7 dot matrix
<b>Cursor Positioning</b>	Space, backspace	Left, right, up, down	Not Available	Left, right, up, down
<b>Vertical Scrolling</b>	None	Standard	Not Available	Standard
<b>Horizontal Scrolling</b>	None	In 3 segments	Not Available	None
<b>Page Scrolling</b>	None	None	Not Available	Opt. w/search program
<b>Display Highlighting</b>	None	Standard	Not Available	None
<b>Character Size Control</b>	None	None	Not Available	None
<b>Character Pitch Display</b>	None	None	Not Available	None
<b>Character Spacing Display</b>	None	None	Not Available	None
<b>Line Spacing Display</b>	None	None	Not Available	None
<b>Line Justify Display</b>	None	None	Not Available	None
<b>Underscore Display</b>	None	Standard	Not Available	Standard
<b>Sub/Superscript Display</b>	None	Codes only	Not Available	Codes only
<b>Multi-Column Page Display</b>	None	None	Not Available	None
<b>Stored Form Recall/Display</b>	None	None	Not Available	Standard
<b>Control Code Display</b>	None	None	Not Available	Standard
<b>Format Statement Display</b>	None	None	Not Available	None
<b>PRINTER STATIONS FEATURES</b> Printer Type & Speed	Daisy wheel 40 cps 6000 chars.	Diablo daisy 45, 55 cps 150 chars.	Diablo daisy 45 cps	IBM Selectric 15.5 cps**
<b>Printer Buffer Memory</b>	10, 12, proportional	10, 12	10, 12	10, 12
<b>Character Pitch/Spacing</b>	13"	13"	13"	13"
<b>Writing Line Width</b>	15"	15"	15"	15.5"
<b>Carriage Paper Width</b>	Standard	Standard	Standard*	Standard
<b>First Line Forms Advance</b>	Standard	Standard	Standard	Standard
<b>End-Of-Page Stop</b>	Standard	Standard	Standard	Standard
<b>Justified Printout</b>	Intercharacter spacing	Intercharacter spacing	Via computer only	None
<b>Sub/Superscript Printout</b>	Standard	Standard	Standard	Standard
<b>Non-Adjust Printout</b>	Standard	Standard	Standard	Standard
<b>Bidirectional Printout</b>	Standard	Standard	None	None
<b>Simultaneous Printout</b>	None	None	Standard	Optional w/display
<b>GEN. FUNCTIONAL FEATURES</b> Media-Stored Format	None	Standard	Standard	None
<b>Default Format Statement</b>	None	None	None	None
<b>Stored Multiple Formats</b>	None	None	None	None
<b>Machine Dialog/Menu Prompt</b>	Prompting cues & error messages	Limited start-up menu	None	None
<b>Forms Input</b>	None	None	None	None
<b>Control Character Printout</b>	Standard	None	During text input	Standard
<b>Printout Queuing</b>	None	None	Lists distributed to different printers	None
<b>Revision &amp; Status Reporting</b>	None	Document index & summary	None	None
<b>System Security</b>	—	None	None	Keylock on comm. module
<b>TEXT INPUT FEATURES</b> Auto Carrier Return	—	None	Standard	None
<b>Auto Word Wraparound</b>	—	None	Standard	None
<b>Auto Margin Adjust</b>	Standard	Standard	Optional	Standard
<b>Temporary Margins</b>	—	None	None	None
<b>Auto Decimal Tab</b>	—	None	None	None
<b>Hyphenation</b>	Manual; adjustable Hot Zone	Stored algorithm or manual; 10-char. Hot Zone	Manual	Manual; 6-char. Hot Zone
<b>REMARKS &amp; OTHER FEATURES</b>		Optional line printer, 240-600 lpm, \$11,100	*Positions both letters & envelopes	*Visual Memory optional, \$2,495 **Qume daisy available as CPT Rotary III, 45 cps



## Standalone Word Processing Systems

Artex	Base	Bedford Computer Systems	CPT	COMPANY
Model 2200	Ultra-Text	Powertype	Cassette 4200 Series	<b>MODEL</b>
Standard	Standard	—	None	<b>TEXT INPUT FEATURES(cont'd)</b>
Standard	Standard	None	None	Auto Input Underline
Standard	Standard	None	None	Auto Centering
Standard	Standard	None	None	Auto Line Spacing
Standard	Standard; 4 locations	None	None	Auto Page Numbering
Standard	Headers only	None	None	Auto Headers/Footers
Standard	Standard	—	Optional w/display	Auto Pagination
Recorded text merge	Recorded text merge	Address list merged w/	Recorded text assembled	<b>TEXT EDIT &amp; MERGE FEATURES</b>
Recorded text to new document	& merged w/ keyboarded text for form new document	letter copy to form new document	& merged w/keyboarded text to form new document	Document Assembly/Merge
Character string	By char. string (max. 40 chars.)	—	Optional; by reference codes	<b>Search Capability</b>
W, L, P, Page	C, L, rest of line	C, W, L	C, L	<b>Delete Capability</b>
Standard; non-global	Standard; max. 50-char. string; replacement auto. or operator-controlled	None	None	<b>Global Search &amp; Replace</b>
Standard	Standard; up to 1 page	None	None	<b>Block Move/Copy</b>
Standard	None	None	None	<b>Column Move/Delete</b>
Standard	Standard; top-of-page integrity	None	None	<b>Auto Repagination</b>
Standard	Scan before print; operator decision	None	None	<b>Auto Widow Adjust</b>
Standard	None	None	None	<b>Auto File Sort</b>
Standard	Standard	None	None	<b>Auto File Select</b>
Standard	None	None	None	<b>Auto Footnote Tie-In</b>
Standard	None	None	None	<b>Term Dictionary/Glossary</b>
Standard	Optional	Standard	Optional	<b>COMMUNICATIONS</b>
Standard	Asynch. or bisynch. COMPAK; 9600 to 72K bps	ASCII: 300 or 1200 baud	Half or full duplex ASCII; 50 to 9600 baud	Availability
Standard	Standard	None	None	Format & Speed
Standard	Standard	None	None	<b>ARITHMETIC CAPABILITY</b>
Standard	Assembler, Fortran IV, COBOL, BASIC	None	None	<b>EDP CAPABILITY</b>
Standard	Accounting	None	None	Multiprogramming
Standard	All Honeywell Level 6 peripherals, OCR	RS-232 devices	Computer tape, photo-composer interfaces	Compilers
Standard	November 1976	May 1976	June 1972*	<b>Applications Software</b>
Standard	USA	USA	USA	<b>PERIPHERALS</b>
Standard	25	8	10,000**	<b>BACKGROUND INFORMATION</b>
Standard	\$22,500	\$8,100*	\$6,295 (w/display option, \$8,990)	First Delivery Date
Standard	\$1,211 (1-yr.)	Not available	\$250	Country of Manufacture
Standard	\$450 (5-yr.)	\$210 (5-yr.)	—	Installed Base Estimate
Standard	\$193/mo.	—	—	<b>PRICING &amp; TERMS</b>
Standard	Honeywell service & programming support	—	90 days	Purchase
Standard				<b>Rental</b>
Standard				<b>Lease</b>
Standard				<b>Maintenance</b>
Standard				<b>Warranty &amp; Support</b>
		*Additional printer station, \$5,000	*Display option introduced Jan. 1977	<b>REMARKS &amp; OTHER FEATURES</b>
			**100 w/display	

## Standalone Word Processing Systems

COMPANY	CPT	Datapoint	Datapoint	Data Terminals & Communications
<b>MODEL</b>	Disktype 8000	Cassette 1100/2200	Diskette 1100/2200/5500	Micro-File
<b>SYSTEM CONFIGURATION</b> Configuration	Keyboard/CRT/diskette console; printer	Keyboard/CRT/console; printer	Keyboard/CRT/console; printer	Diskette console, keyboard/printer
<b>Memory Size</b>	—	—	—	8K
<b>Storage Media</b>	Dual diskette	Dual cassette	1 to 4 diskettes	2 or 4 diskettes
<b>Storage Capacity</b>	250K chars./diskette	130K chars./cassette	256K chars./diskette	300K chars./diskette
<b>DISPLAY STATION FEATURES</b>				
Screen Size & Type	13" diagonal CRT	3.5" x 7" CRT	3.5" x 7" CRT	Not Available
Display Buffer Memory	8K chars.	—	—	Not Available
Format & Capacity	54 lines x 90 chars. (4860 chars. total)	12 lines x 80 chars. (960 chars. total)	12 lines x 80 chars. (960 chars. total)	Not Available
Character Generation	7 x 9 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	Not Available
Cursor Positioning	Space, backspace	—	—	Not Available
Vertical Scrolling	Standard	Standard	Standard	Not Available
Horizontal Scrolling	Standard	None	None	Not Available
Page Scrolling	Standard	None	None	Not Available
Display Highlighting	None	None	None	Not Available
Character Size Control	None	Standard	Standard	Not Available
Character Pitch Display	None	Standard	Standard	Not Available
Character Spacing Display	None	None	None	Not Available
Line Spacing Display	None	Standard	Standard	Not Available
Line Justify Display	Standard	Standard	Standard	Not Available
Underscore Display	Standard	Code only	Code only	Not Available
Sub/Superscript Display	Standard	None	None	Not Available
Multi-Column Page Display	None	—	—	Not Available
Stored Form Recall/Display	Standard	—	—	Not Available
Control Code Display	Standard	Standard	Standard	Not Available
Format Statement Display	Format display line	—	—	Not Available
<b>PRINTER STATIONS FEATURES</b>				
Printer Type & Speed	Daisy wheel 30,45,55 cps	Diablo daisy 30 cps*	Diablo daisy 30 cps	DTC-302 45 cps
Printer Buffer Memory	—	—	—	—
Character Pitch/Spacing	10, 12	10, 12	10, 12	10, 12
Writing Line Width	13"	13.2"	13.2"	13.2"
Carriage Paper Width	15"	15"	15"	15"
First Line Forms Advance	Standard	Standard	Standard	Standard
End-Of-Page Stop	Standard	Standard	Standard	Standard
Justified Printout	Standard	Standard; interword sp.	Standard; interword sp.	Standard
Sub/Superscript Printout	Standard	Standard	Standard	Standard
Non-Adjust Printout	Standard	Standard	Standard	Standard
Bidirectional Printout	Standard	Standard	Standard	Standard
Simultaneous Printout	Standard	None	None	None
<b>GEN. FUNCTIONAL FEATURES</b>				
Media-Stored Format	Standard	Standard	Standard	Standard
Default Format Statement	None	Standard	Standard	None
Stored Multiple Formats	None	Standard	Standard	None
Machine Dialog/Menu Prompt	None	Cursor flashes at insert point	Cursor flashes at insert point	None
Forms Input	None	None	None	None
Control Character Printout	Standard	Standard	Standard	Standard
Printout Queuing	None	Standard	Standard	None
Revision & Status Reporting	System mode & current line no. displayed	—	—	None
System Security	Keylock on comm. module	None	None	None
<b>TEXT INPUT FEATURES</b>				
Auto Carrier Return	Standard	Standard	Standard	None
Auto Word Wraparound	Standard	Standard	Standard	None
Auto Margin Adjust	Standard	Standard	Standard	Standard
Temporary Margins	Standard	—	—	None
Auto Decimal Tab	Standard	Standard	Standard	None
Hyphenation	Manual; adjustable Hot Zone	Auto word wrap unless operator intervention	Auto word wrap unless operator intervention	Manual; adjustable Hot Zone
<b>REMARKS &amp; OTHER FEATURES</b>	Rotary II (Selectric), 15.5 cps & GE line printer, 240 cps, also available	*Freedom draft printer, 80 cps, & line printers, 300 to 600 lpm, also available		

## Standalone Word Processing Systems

CPT	Datapoint	Datapoint	Data Terminals & Communications	COMPANY
	Cassette 1100/2200	Diskette 1100/2200/5500	Micro File	MODEL
	Standard	Standard	Standard	TEXT INPUT FEATURES (cont'd)
	Standard	Standard	Standard	Auto Input Underline
	—	—	None	Auto Centering
	Standard	Standard*	None	Auto Line Spacing
	Standard	Standard	None	Auto Page Numbering
	Standard	Standard	None	Auto Headers/Footers
	Standard	Standard	None	Auto Pagination
	Recorded text merged w/keyboarded text	Recorded text merged w/keyboarded text	Recorded insertions merged w/keyboarded text	TEXT EDIT & MERGE FEATURES
	By document name & char. string C, W, L, S, P	By document name & char. string C, W, L, S, P	By line number	Document Assembly/Merge
	Standard	Standard	L	Search Capability
	Assign line nos. & move or copy text	Assign line nos. & move or copy text	Standard; non-global	Delete Capability
	None	None	None	Global Search & Replace
	Standard	Standard	None	Block Move/Copy
	None	None	None	Column Move/Delete
	Standard	Standard	None	Auto Repagination
	None	None	None	Auto Widow Adjust
	None	Standard; will merge from different files**	None	Auto File Sort
	None	Standard	2-level standard	Auto File Select
	None	None	None	Auto Footnote Tie-In
	Standard	Standard	None	Term Dictionary/Glossary
	Optional DATAPOLL software; 110 to 4800 baud	Optional DATAPOLL software; 110 to 4800 baud	Standard Asynchronous ASCII; 110 to 9600 baud	COMMUNICATIONS
	Optional software, \$15	Optional software, \$15	Full	Availability
	—	—	None	Format & Speed
	RPG II, Datashare, BASIC Available	RPG II, Datashare BASIC Available	Assembler, BASIC*	ARITHMETIC CAPABILITY
	Computer tape interface RS-232 devices	Computer tape interface RS-232 devices	Available from DT&C	EDP CAPABILITY
	1970 USA	1974 USA	Additional diskette drives, add-on memory, RS-232 devices	Multiprogramming Compilers
	\$6,834 w/o printer*	\$12,880 w/o printer***	December 1976 USA	Applications Software
	\$173 (2-yr.)	\$209 (3-yr.)	\$4,295 (dual disk.)**	PERIPHERALS
	\$117 (5-yr.)	\$170 (5-yr.)	\$6,750 (4 diskette)**	BACKGROUND INFORMATION
	\$60/mo.	\$60/mo.	—	First Delivery Date
	—	—	—	Country of Manufacture
	—	—	—	Installed Base Estimate
	—	—	—	PRICING & TERMS
	—	—	—	Purchase
	—	—	—	Rental
	—	—	—	Lease
	—	—	—	Maintenance
	—	—	—	Warranty & Support
	*Diablo daisy, 30 cps, \$5,430; matrix printer, 80 cps, \$3,950	*MSCRIBE package for proposal writing does section numbers, table of contents & index extraction **More sophisticated file management avail. via user programming **Diablo daisy, 30 cps \$5,430; matrix printer, 80 cps, \$3,950	*BASIC compiler requires additional memory **Without printer; DTC-302, \$3,490	REMARKS & OTHER FEATURES



## Standalone Word Processing Systems

COMPANY	A.B. Dick	Digital Equipment (DEC)	Digital Equipment (DEC)	Edit Systems
<b>MODEL</b>	Magna I	Datsystem 310W/WS 100	WS-78	Text Ed III
<b>SYSTEM CONFIGURATION</b> Configuration	Typewriter; card console	Keyboard/CRT/desk, printer/cabinet	—	Terminal, printer
<b>Memory Size</b>	8K	—	64K; expandable	—
<b>Storage Media</b>	Magnetic card	Dual diskette	Dual diskette	3M data cartridge
<b>Storage Capacity</b>	5K chars./card	250K chars./text disk.	250K chars./diskette	768K chars./cartridge
<b>DISPLAY STATION FEATURES</b>				
Screen Size & Type	Not Available	12" diagonal CRT	12" diagonal CRT	1" x 12" LED
Display Buffer Memory	Not Available	2K chars.	16K words	None
Format & Capacity	Not Available	24 lines x 80 chars. (1920 chars. total)	24 lines x 80 chars. (1920 chars. total)	1 line x 32 chars. (32 chars. total)
Character Generation	Not Available	5 x 7 dot matrix	5 x 7 dot matrix	LED
Cursor Positioning	Not Available	Left, right along fixed line	Left, right along fixed line	Left, right
Vertical Scrolling	Not Available	Standard	Standard	None
Horizontal Scrolling	Not Available	None	None	None
Page Scrolling	Not Available	Standard	Standard	None
Display Highlighting	Not Available	None	None	None
Character Size Control	Not Available	None	None	None
Character Pitch Display	Not Available	None	None	None
Character Spacing Display	Not Available	None	None	None
Line Spacing Display	Not Available	Standard	Standard	None
Line Justify Display	Not Available	None	None	None
Underscore Display	Not Available	Code only	Code only	None
Sub/Superscript Display	Not Available	None	None	None
Multi-Column Page Display	Not Available	Manual	Manual	None
Stored Form Recall/Display	Not Available	Standard	Standard	None
Control Code Display	Not Available	Standard	Standard	None
Format Statement Display	Not Available	Standard	Standard	None
<b>PRINTER STATIONS FEATURES</b>				
Printer Type & Speed	Qume daisy 45 cps	Daisy wheel 45 cps	DEC LQP-78 45 cps*	Qume daisy 45 cps*
Printer Buffer Memory	None	—	—	—
Character Pitch/Spacing	10 & 12	10, 12	10, 12	10, 12
Writing Line Width	13.2"	13.2"	13.2"	14"
Carriage Paper Width	15"	15"	Standard	15"
First Line Forms Advance	Standard	Standard	Standard	Standard
End-Of-Page Stop	Standard w/program card	Standard	Standard	Standard
Justified Printout	Standard w/program card	Standard	Standard	Standard; interchar. sp.
Sub/Superscript Printout	Standard	Standard	Standard	Standard
Non-Adjust Printout	Standard	Standard	Standard	Standard
Bidirectional Printout	None	Standard	Standard	Standard
Simultaneous Printout	None	Standard	Standard	Standard
<b>GEN. FUNCTIONAL FEATURES</b>				
Media-Stored Format	Standard	Standard	Standard	Standard
Default Format Statement	None	Standard	Standard	Standard
Stored Multiple Formats	None	Standard	—	Standard
Machine Dialog/Menu Prompt	Display shows machine status	Displays all operator options; DP menu (310W)	3 main menus of operator prompts	None
Forms Input	None	Standard	None	None
Control Character Printout	Standard w/program card	Limited	None	Standard
Printout Queuing	None	—	8-document list with deletion & revision**	Optional
Revision & Status Reporting	None	Index shows date & time of last doc. access	Index shows date & time of last doc. access	Edit mode shows no. of revisions
System Security	None	None	Log-on password; 3 security levels	None
<b>TEXT INPUT FEATURES</b>				
Auto Carrier Return	Standard	Standard	Standard	Standard
Auto Word Wraparound	None	Standard	Standard	Standard
Auto Margin Adjust	Standard	Standard	Standard	Standard
Temporary Margins	None	Standard	Standard	Standard
Auto Decimal Tab	Standard	Standard	Standard	Standard
Hyphenation	Scan & operator decision; adjustable Hot Zone	Ghost hyphens; manual insertion	Ghost hyphens; manual insertion	Optional algorithm
<b>REMARKS &amp; OTHER FEATURES</b>			*Draft printers, 180 cps & 34 lpm, also avail. **Print queue can send different pages of doc. to different printers	*IBM Selectric, 15.5 cps & GE line printer, 120 cps, available

## Standalone Word Processing Systems

A.B. Dick	Digital Equipment (DEC)	Digital Equipment (DEC)	Edit Systems	COMPANY
Model	Datsystem 310W/WS 100	WS 78	Text Ed III	MODEL
Standard: Between margins or about any point Standard; 10 settings Standard Standard Standard	Standard Between margins or about any point Standard Standard Standard Standard	Standard Between margins or about any point Standard Standard Standard Standard	Standard Standard Standard Standard Standard	TEXT INPUT FEATURES(cont'd) Auto Input Underline Auto Centering  Auto Line Spacing Auto Page Numbering Auto Headers/Footers Auto Pagination TEXT EDIT & MERGE FEATURES Document Assembly/Merge
Stored text merged Newentered text	Recorded text merged w/lists, boilerplates or keyboarded text	Stored text assembled and merged w/keyboard- ed text	Stored text assembled & merged w/keyboarded text to form new document	
View number (card) Char. string (memory) M, L, S, Page	By doc. & page no., char. string & cursor C, W, L, S & document	By doc. & page no., char. string & cursor C, W, L, S & document	By doc. & line number —	Search Capability  Delete Capability
Global search for char. max string; manual replacement	Standard; manual replacement or deletion	Standard; manual replacement or deletion	Search for word or char. string; auto or manual replacement	Global Search & Replace
Standard	Standard	Standard	Complete lines moved or copied w/in document Standard	Block Move/Copy  Column Move/Delete
Manual; line-by-line	Manual; line-by-line	Via user-defined function key Standard	Standard	Auto Repagination
Standard	Standard	Standard	Standard	Auto Widow Adjust
Manual	Manual	Manual	Standard	Auto File Sort
Optional	Optional	Optional	None	Auto File Select
Single-level standard; 6-level optional Manual Standard	Single-level standard; 6-level optional Manual Standard	Single-level standard; 6-level optional Manual Standard	Optional search program  Auto numbering Format instructions abbrev. to codes	Auto Footnote Tie-In Term Dictionary/Glossary
Auto 25 items stored memory				COMMUNICATIONS Availability Format & Speed
Optional; \$1,500 IBM 2741-com- patible ASCII; 10, 15, 30 cps Not announced	Optional; \$1,500 Asynchronous ASCII, 300 to 9600 baud  Standard (310W DP mode)	Optional, \$1,500 Asynchronous full duplex ASCII  None	Standard ASCII; 75 to 1200 baud  None	ARITHMETIC CAPABILITY EDP CAPABILITY Multiprogramming Compilers
None DIBOL	None DIBOL	None BASIC + 2, SORT 11	None None	Applications Software
Accounting & others avail. (310W only) None	Accounting & others avail. (310W only) None	None OCR*	None OCR, photocomposer interface direct or via paper tape	PERIPHERALS
First 1976 USA	February 1976 USA	October 1977 USA	1972 USA	BACKGROUND INFORMATION First Delivery Date Country of Manufacture Installed Base Estimate
	\$23,600 (310W) \$19,800 (WS 100) —	\$9,995 w/o printer** —	\$12,000 \$480*	PRICING & TERMS Purchase
	Leasing from 3rd party agents \$134/mo.  90 days; 3 days N/C operator training	— — —	Not Available — —	Rental  Lease  Maintenance  Warranty & Support
	WS100 & 310W are iden- tical hardware; no DP software in WS100	*Compu-Scan, ECRM, Hendrix & Context all supported **LQP-78 printer, \$3,995 Can switch from stand- alone to terminal for shared logic configuration	*Includes maintenance	REMARKS & OTHER FEATURES

## Standalone Word Processing Systems

COMPANY	IBM	IBM	IBM	IBM
<b>MODEL</b>	MC/ET	MC/ST-II	MC/A	Memory Typewriter 50/100
<b>SYSTEM CONFIGURATION</b> Configuration	Card console, typewriter	Card console, typewriter	Card console, typewriter	Typewriter
<b>Memory Size</b>	—	8K	6K	—
<b>Storage Media</b>	Magnetic card	Magnetic card	Magnetic card	Internal memory belt
<b>Storage Capacity</b>	50 lines/card	50 lines/card	50 lines/card	200K, 400K chars.
<b>DISPLAY STATION FEATURES</b>				
Screen Size & Type	Not Available	Not Available	Not Available	Not Available
Display Buffer Memory	Not Available	Not Available	Not Available	Not Available
Format & Capacity	Not Available	Not Available	Not Available	Not Available
Character Generation	Not Available	Not Available	Not Available	Not Available
Cursor Positioning	Not Available	Not Available	Not Available	Not Available
Vertical Scrolling	Not Available	Not Available	Not Available	Not Available
Horizontal Scrolling	Not Available	Not Available	Not Available	Not Available
Page Scrolling	Not Available	Not Available	Not Available	Not Available
Display Highlighting	Not Available	Not Available	Not Available	Not Available
Character Size Control	Not Available	Not Available	Not Available	Not Available
Character Pitch Display	Not Available	Not Available	Not Available	Not Available
Character Spacing Display	Not Available	Not Available	Not Available	Not Available
Line Spacing Display	Not Available	Not Available	Not Available	Not Available
Line Justify Display	Not Available	Not Available	Not Available	Not Available
Underscore Display	Not Available	Not Available	Not Available	Not Available
Sub/Superscript Display	Not Available	Not Available	Not Available	Not Available
Multi-Column Page Display	Not Available	Not Available	Not Available	Not Available
Stored Form Recall/Display	Not Available	Not Available	Not Available	Not Available
Control Code Display	Not Available	Not Available	Not Available	Not Available
Format Statement Display	Not Available	Not Available	Not Available	Not Available
<b>PRINTER STATIONS FEATURES</b>				
Printer Type & Speed	IBM Executive 15 cps	IBM Selectric 15.5 cps	IBM Selectric 15.5 cps	IBM Selectric 15.5 cps
Printer Buffer Memory	None	None	None	None
Character Pitch/Spacing	Proportional	10 & 12	10 & 12	10 & 12
Writing Line Width	13"	12.5"	12.5"	12.5"
Carriage Paper Width	15.5"	15"	15"	15"
First Line Forms Advance	None	None	None	None
End-Of-Page Stop	Standard	Standard	Standard	Standard
Justified Printout	Standard	None	None	None
Sub/Superscript Printout	None	Merge code only	Merge code only	None
Non-Adjust Printout	None	None	None	None
Bidirectional Printout	None	None	None	None
Simultaneous Printout	None	None	None	None
<b>GEN. FUNCTIONAL FEATURES</b>				
Media-Stored Format	None	Optional*	Optional*	None
Default Format Statement	None	None	None	None
Stored Multiple Formats	None	None	None	None
Machine Dialog/Menu Prompt	None	None	None	None
Forms Input	None	None	None	None
Control Character Printout	None	None	None	None
Printout Queuing	None	None	None	None
Revision & Status Reporting	None	None	None	None
System Security	—	—	Optional communications lock	Keylock option, \$35
<b>TEXT INPUT FEATURES</b>				
Auto Carrier Return	None	None	None	None
Auto Word Wraparound	None	None	None	None
Auto Margin Adjust	Standard	Standard	Standard	Standard
Temporary Margins	None	None	None	None
Auto Decimal Tab	Standard	Standard	Standard	Standard
Hyphenation	Manual or ghost hyphens 6-char. Hot Zone	Manual or ghost hyphens, 6-char. Hot Zone	Manual or ghost hyphens, 6-char. Hot Zone	Manual or ghost hyphens, 6-char. Hot Zone
<b>REMARKS &amp; OTHER FEATURES</b>		*Requires Format option, \$400	*Requires Format option, \$400	



## Standalone Word Processing Systems

IBM	IBM	IBM	IBM	COMPANY
Model	MC/ST-II	MC/A	Memory Typewriter 50/100	MODEL
Standard	Standard	Standard	Standard	TEXT INPUT FEATURES(cont'd)
Standard	Standard	Standard	Standard	Auto Input Underline
None	None	None	None	Auto Centering
None	None	None	None	Auto Line Spacing
None	None	None	None	Auto Page Numbering
None	None	None	None	Auto Headers/Footers
None	None	None	None	Auto Pagination
Stored text merged w/keyboarded text	Stored text merged w/keyboarded text	Stored text merged w/keyboarded text	Stored text merged w/keyboarded text	TEXT EDIT & MERGE FEATURES
By skipping C, W, L, P	By skipping C, W, L, P	By skipping C, W, L, P	By skipping C, W, L, P	Document Assembly/Merge
C, W, L, P	C, W, L, P	C, W, L, P	Backspace correction by char.	Search Capability
None	None	None	None	Delete Capability
None	None	None	None	Global Search & Replace
None	None	None	None	Block Move/Copy
None	None	None	None	Column Move/Delete
None	None	None	None	Auto Repagination
None	None	None	None	Auto Widow Adjust
None	None	None	None	Auto File Sort
None	None	None	None	Auto File Select
None	None	None	None	Auto Footnote Tie-In
None	None	None	None	Term Dictionary/Glossary
Optional IBM 2741-compatible; 14.8 cps	Optional IBM 2741-compatible; 14.8 cps	Optional IBM 2741-compatible; 14.8 cps	None	COMMUNICATIONS
None	None	None	None	Availability
None	None	None	None	Format & Speed
None	None	None	None	ARITHMETIC CAPABILITY
None	None	None	None	EDP CAPABILITY
None	None	None	None	Multiprogramming
None	None	None	None	Compilers
None	None	None	None	Applications Software
IBM OS/6 & 6640 printer	IBM OS/6 & 6640 printer	IBM OS/6 & 6640 printer	None	PERIPHERALS
April 1973	September 1975	1974(50), 1977(100)	1974(50), 1977(100)	BACKGROUND INFORMATION
USA	USA	USA	USA	First Delivery Date
35,000	7,000	—	—	Country of Manufacture
\$12,390	\$10,400	\$4,900 (50)	\$4,900 (50)	Installed Base Estimate
\$310*	\$260*	\$5,500 (100)	\$5,500 (100)	PRICING & TERMS
\$275 (2-yr.)	\$230 (2-yr.)	\$180	\$180	Purchase
\$42/mo.	\$38/mo.	\$200	\$200	Rental
—	—	\$158	\$158	Lease
		\$176 (2-yr.)	\$176 (2-yr.)	Maintenance
		\$26/mo.	\$26/mo.	Warranty & Support
		\$28/mo.	\$28/mo.	
		—	—	
*Includes maintenance	*Includes maintenance	An MT/50 can be up- graded to a MT/100, \$800		REMARKS & OTHER FEATURES

## Standalone Word Processing Systems

COMPANY	IBM	IBM	IBM	IBM
<b>MODEL</b>	MT/ST-II	MT/ST-IV	OS 6/430	OS 6/440
<b>SYSTEM CONFIGURATION</b> Configuration	Typewriter, tape console	Typewriter, tape console	Keyboard/CRT/media console	Keyboard/CRT/diskette console, printer
<b>Memory Size</b>	—	—	128K	128K
<b>Storage Media</b>	Tape cartridge	Dual tape cartridge	Magnetic card & diskette	Diskette
<b>Storage Capacity</b>	23K chars./cartridge	23K chars./cartridge	274K disk./5K card	274K chars./diskette
<b>DISPLAY STATION FEATURES</b>				
Screen Size & Type	Not Available	Not Available	9" x 6" CRT	9" x 6" CRT
Display Buffer Memory	Not Available	Not Available	1024 chars.	1024 chars.
Format & Capacity	Not Available	Not Available	8 lines x 83 chars. (664 chars. total)	8 lines x 83 chars. (664 chars. total)
Character Generation	Not Available	Not Available	—	—
Cursor Positioning	Not Available	Not Available	Left, right along fixed line	Left, right along fixed line
Vertical Scrolling	Not Available	Not Available	Standard	Standard
Horizontal Scrolling	Not Available	Not Available	3 68-char. segments	3 68-char. segments
Page Scrolling	Not Available	Not Available	None	None
Display Highlighting	Not Available	Not Available	Flashing	Flashing
Character Size Control	Not Available	Not Available	None	None
Character Pitch Display	Not Available	Not Available	Standard	Standard
Character Spacing Display	Not Available	Not Available	Standard	Standard
Line Spacing Display	Not Available	Not Available	Double space only	Double space only
Line Justify Display	Not Available	Not Available	Standard	Standard
Underscore Display	Not Available	Not Available	Standard	Standard
Sub/Superscript Display	Not Available	Not Available	Code only	Code only
Multi-Column Page Display	Not Available	Not Available	None	None
Stored Form Recall/Display	Not Available	Not Available	Standard	Standard
Control Code Display	Not Available	Not Available	Limited	Limited
Format Statement Display	Not Available	Not Available	Standard	Standard
<b>PRINTER STATIONS FEATURES</b>				
Printer Type & Speed	IBM Selectric 15.5 cps	IBM Selectric 15.5 cps	Not Available	IBM ink jet 92 cps
Printer Buffer Memory	—	—	Not Available	512 chars.
Character Pitch/Spacing	10, 12	10, 12	Not Available	10, 12, proportional
Writing Line Width	13"	13"	Not Available	14"
Carriage Paper Width	15.5"	15.5"	Not Available	—
First Line Forms Advance	None	None	Not Available	Standard
End-Of-Page Stop	Standard	Standard	Not Available	Standard
Justified Printout	None	None	Not Available	Standard
Sub/Superscript Printout	Standard	Standard	Not Available	Standard
Non-Adjust Printout	Standard	Standard	Not Available	Standard
Bidirectional Printout	None	None	Not Available	None
Simultaneous Printout	None	None	Not Available	Standard
<b>GEN. FUNCTIONAL FEATURES</b>				
Media-Stored Format	None	None	Standard	Standard
Default Format Statement	None	None	Standard	Standard
Stored Multiple Formats	None	None	Standard	Standard
Machine Dialog/Menu Prompt	None	None	"Frames" display operator options	"Frames" display operator options
Forms Input	None	None	Standard	Standard
Control Character Printout	None	None	None	None
Printout Queuing	None	None	None	Up to 12 pages
Revision & Status Reporting	None	None	None	None
System Security	None	None	Keylock & password for communications	Keylock & password for communications
<b>TEXT INPUT FEATURES</b>				
Auto Carrier Return	None	None	None	None
Auto Word Wraparound	None	None	None	None
Auto Margin Adjust	Standard	Standard	Standard	Standard
Temporary Margins	Standard	Standard	Left only	Left only
Auto Decimal Tab	None	None	Standard	Standard
Hyphenation	Manual; 6-char. Hot Zone	Manual; 6-char. Hot Zone	Manual; adjustable (3 to 12 char.) Hot Zone	Manual; adjustable (3 to 12 char.) Hot Zone
<b>REMARKS &amp; OTHER FEATURES</b>				

## Standalone Word Processing Systems

IBM	IBM	IBM	IBM	COMPANY
IBM 5540	MT/ST-IV	OS 6/430	OS 6/440	MODEL
None	None	Standard	Standard	TEXT INPUT FEATURES(cont'd)
None	None	About any point	About any point	Auto Input Underline
None	None	Standard	Standard	Auto Centering
None	None	Standard	Standard	Auto Line Spacing
None	None	Standard	Standard	Auto Page Numbering
None	None	Standard	Standard	Auto Headers/Footers
None	None	Standard	Standard	Auto Pagination
Stored text assembled & merged w/keyboarded text	Stored text assembled & merged w/keyboarded text	Stored text assembled & merged w/keyboarded text to form new document	Stored text assembled & merged w/keyboarded text to form new document	TEXT EDIT & MERGE FEATURES
By skipping C, W, L, P	By skipping C, W, L, P	By job no., para. no., & cursor position	By job no., para. no., & cursor position	Document Assembly/Merge
C, W, L, P	C, W, L, P	C, W, L	C, W, L	Search Capability
None	None	None	None	Delete Capability
None	None	None	None	Global Search & Replace
None	None	Standard	Standard	Block Move/Copy
None	None	Records processing only	Records processing only	Column Move/Delete
None	None	Standard	Standard	Auto Repagination
None	None	Operator controlled scan	Operator controlled scan	Auto Widow Adjust
None	None	Standard	Standard	Auto File Sort
None	None	Standard	Standard	Auto File Select
None	None	None	None	Auto Footnote Tie-In
None	None	None	None	Term Dictionary/Glossary
None	None	Optional	Optional	COMMUNICATIONS
—	—	Bisynchronous EBCDIC, ASCII & TEXCODE at 600 to 2400 baud	Bisynchronous EBCDIC, ASCII & TEXCODE at 600 to 2400 baud	Availability
None	None	None	None	Format & Speed
None	None	None	None	ARITHMETIC CAPABILITY
None	None	None	None	EDP CAPABILITY
None	None	None	None	Multiprogramming
None	None	None	None	Compilers
None	None	None	None	Applications Software
None	None	IBM 6640 printer, Mag Card series	IBM Mag Card series	PERIPHERALS
October 1964	October 1964	June 1977	June 1977	BACKGROUND INFORMATION
USA	USA	USA	USA	First Delivery Date
—	—	—	—	Country of Manufacture
\$5,400	\$5,400	\$16,450	\$28,000	Installed Base Estimate
\$270	\$270	\$470*	\$800*	PRICING & TERMS
—	—	\$415 (2-yr.)*	\$705 (2-yr.)*	Purchase
—	—	\$900/yr.	\$1,500/yr.	Rental
—	—	90 days	90 days	Lease
				Maintenance
				Warranty & Support
		*Includes maintenance	*Includes maintenance	REMARKS & OTHER FEATURES



## Standalone Word Processing Systems

COMPANY	IBM	IBM	Lanier	Lanier
<b>MODEL</b>	OS 6/450	MC/ST	LTE-1	LTE-2S/2D
<b>SYSTEM CONFIGURATION</b> Configuration	Keyboard/CRT/media console, printer	Card console, typewriter	Keyboard/CRT, diskette console, printer	Keyboard/CRT, diskette console, printer
<b>Memory Size</b>	128K	—	—	—
<b>Storage Media</b>	Magnetic card & diskette	Magnetic card	Diskette	Single* or dual diskette
<b>Storage Capacity</b>	274K disk./5K card	50 lines/card	300K chars./diskette	300K chars./diskette
<b>DISPLAY STATION FEATURES</b>				
Screen Size & Type	9" x 6" CRT	Not Available	12" diagonal CRT	12" diagonal CRT
Display Buffer Memory	1024 chars.	Not Available	63 or 95 line	63 or 95 line
Format & Capacity	8 lines x 83 chars. (664 chars. total)	Not Available	24 lines x 80 chars. or 15 lines x 128 chars.	24 lines x 80 chars. or 15 lines x 128 chars.
Character Generation	—	Not Available	Dot matrix	Dot matrix
Cursor Positioning	Left, right along fixed line	Not Available	Left, right, up, down, home	Left, right, up, down, home
Vertical Scrolling	Standard	Not Available	Up to 95 lines	Up to 95 lines
Horizontal Scrolling	3 68-char. segments	Not Available	Up to 128 chars.	Up to 128 chars.
Page Scrolling	None	Not Available	None	None
Display Highlighting	Flashing	Not Available	Flashing	Flashing
Character Size Control	None	Not Available	None	None
Character Pitch Display	Standard	Not Available	None	None
Character Spacing Display	Standard	Not Available	None	None
Line Spacing Display	Double space only	Not Available	Standard	Standard
Line Justify Display	Standard	Not Available	Standard	Standard
Underscore Display	Standard	Not Available	Standard	Standard
Sub-/Superscript Display	Code only	Not Available	Standard	Standard
Multi-Column Page Display	None	Not Available	Standard	Standard
Stored Form Recall/Display	Standard	Not Available	Standard	Standard
Control Code Display	Limited	Not Available	Standard	Standard
Format Statement Display	Standard	Not Available	Standard	Standard
<b>PRINTER STATIONS FEATURES</b>				
Printer Type & Speed	IBM ink jet 92 cps 512 chars.	IBM Selectric 15.5 cps	Daisy wheel 45 cps	Qume Sprint III 45 cps
Printer Buffer Memory	10, 12, proportional	10, 12	10 & 12	6, 8, 10, 12, 15
Character Pitch/Spacing	14"	13"	13"	13"
Writing Line Width	—	15.5"	15"	15"
Carriage Paper Width	Standard	None	Standard	Standard
First Line Forms Advance	Standard	Standard	Standard	Standard
End-Of-Page Stop	Standard	None	Standard	Standard
Justified Printout	Standard	Standard	Standard	Standard
Sub-/Superscript Printout	Standard	Standard	Standard	Standard
Non-Adjust Printout	Standard	Standard	Standard	Standard
Bidirectional Printout	None	None	None	None
Simultaneous Printout	Standard	None	Standard	Standard
<b>GEN. FUNCTIONAL FEATURES</b>				
Media-Stored Format	Standard	None	Standard	Standard
Default Format Statement	Standard	None	Standard	Standard
Stored Multiple Formats	Standard	None	None	None
Machine Dialog/Menu Prompt	"Frames" display operator options	None	None	None
Forms Input	Standard	None	Standard	Standard
Control Character Printout	None	None	None	None
Printout Queuing	Up to 12 pages	None	Print from display buffer or diskette	Print from display buffer or diskette
Revision & Status Reporting	None	None	Status messages on display	Status messages on display
System Security	Keylock & password for communications	None	Keylock (N/C option)	Keylock (N/C option)
<b>TEXT INPUT FEATURES</b>				
Auto Carrier Return	None	None	Standard	Standard
Auto Word Wraparound	None	None	Standard	Standard
Auto Margin Adjust	Standard	Standard	Standard	Standard
Temporary Margins	Left only	Standard	Standard	Standard
Auto Decimal Tab	Standard	None	Standard	Standard
Hyphenation	Manual; adjustable (3 to 12 char.) Hot Zone	Manual; 6-char. Hot Zone	Manual	Manual
<b>REMARKS &amp; OTHER FEATURES</b>			Boldface printing avail.	*Second diskette drive can be added at any time, \$1,800

## Standalone Word Processing Systems

IBM	IBM	Lanier	Lanier	COMPANY
Model 432	MC/ST	LTE-1	LTE-2S/2D	MODEL
disk	None	Standard	Standard	TEXT INPUT FEATURES(cont'd)
auto input	None	Multiple lines centered simultaneously	Multiple lines centered simultaneously	Auto Input Underline
auto centering	None	Standard	Standard	Auto Centering
auto line spacing	None	Standard	Standard	Auto Line Spacing
auto page numbering	None	Standard	Standard	Auto Page Numbering
auto headers/footers	None	Standard	Standard	Auto Headers/Footers
auto pagination	None	Standard	Standard	Auto Pagination
TEXT EDIT & MERGE FEATURES	Stored text merged with keyboarded text	Stored text merged w/keyboarded text to form new document	Stored text assembled from each diskette (2D only) & merged w/keyboarded text	Document Assembly/Merge
document assembly/merge	By skipping C, W, L, P	By doc. name, page no. & cursor position	By doc. name, page no. & cursor position	Search Capability
document position	C, W, L, P	C, W, L, P, display contents	C, W, L, P, display contents	Delete Capability
document	None	None	None	Global Search & Replace
document	None	Standard	Standard	Block Move/Copy
document processing only	None	None	Standard	Column Move/Delete
document	None	Operator defines no. of lines per page*	Operator defines no. of lines per page*	Auto Repagination
document-controlled scan	None	None	Standard	Auto Widow Adjust
document	None	Background alphanumeric sorts	Background alphanumeric sorts	Auto File Sort
document	None	Standard	Standard	Auto File Select
document	None	None	Standard	Auto Footnote Tie-In
document	None	None	None	Term Dictionary/Glossary
document	Optional* IBM 2741-compatible; 14.8 cps	Optional, \$1,800 Half-duplex asynch. IBM 2741 & 2780-compat.; 300 to 2400 baud	Optional, \$1,800 Half-duplex asynch. IBM 2741 & 2780-compat.; 300 to 2400 baud	COMMUNICATIONS
document	None	None	None	Availability
document	None	None	None	Format & Speed
document	None	None	None	ARITHMETIC CAPABILITY
document	None	None	None	EDP CAPABILITY
document	None	None	None	Multiprogramming
document	None	None	None	Compilers
document	None	None	None	Applications Software
document	IBM OS/6, 6640 printer	OCR	OCR, photocomposer interface	PERIPHERALS
document	October 1969 USA	March 1976 USA	July 1977 USA	BACKGROUND INFORMATION
document	\$7,200	\$17,400	\$18,900 (2D)** \$17,400 (2S)**	First Delivery Date
document	\$195	\$600 (2-yr.)	—	Country of Manufacture
document	\$170 (2-yr.)	Third party leasing agents	Third party leasing agents	Installed Base Estimate
document	Manufacturer	—	\$900	PRICING & TERMS
document	—	3 months; N/C operator training	3 months; N/C operator training	Purchase
document	—	—	—	Rental
document	—	—	—	Lease
document	—	—	—	Maintenance
document	—	—	—	Warranty & Support
document	*CMC/ST (w/communications), \$9,550	*Document is paginated, indexed & numbered	*Documented is indexed, paginated & numbered **Avail. w/o printer, cable connection for 2 systems to share a printer, \$300	REMARKS & OTHER FEATURES

## Standalone Word Processing Systems

COMPANY	Lexitron	Lexitron	Lexitron	Lexitron
<b>MODEL</b>	911/912/913	920	921/922	942
<b>SYSTEM CONFIGURATION</b> Configuration	Keyboard/CRT/cassette console, printer	Keyboard/CRT/cassette console, printer	Keyboard/CRT/cassette console, printer	Keyboard/CRT/cassette console, printer
<b>Memory Size</b>	—	—	—	—
<b>Storage Media</b>	Cassette	Cassette	Cassette	Dual Cassette
<b>Storage Capacity</b>	140K chars./cassette	140K chars./cassette	140K chars./cassette	140K chars./cassette
<b>DISPLAY STATION FEATURES</b>				
Screen Size & Type	8½" x 11" CRT	8½" x 11" CRT	8½" x 11" CRT	8½" x 11" CRT
Display Buffer Memory	8K chars.	8K chars.	8K chars.	8K chars.
Format Capacity	66 lines x 85 chars. (5610 chars. total)	66 lines x 85 chars.* (5610 chars. total)	66 lines x 85 chars.* (5610 chars. total)	66 lines x 85 chars.* (5610 chars. total)
Character Generation	Stroke writing	Stroke writing	Stroke writing	Stroke writing
Cursor positioning	Left, right, return	Left, right, return	Left, right, return	Left, right, return
Vertical Scrolling	Standard	Standard	Standard	Standard
Horizontal Scrolling	None	None	None	None
Page Scrolling	Standard	Standard	Standard	Standard
Display Highlighting	None	None	None	None
Character Size Control	None	None	None	None
Character Pitch Display	Standard	Standard	Standard	Standard
Character Spacing Display	Standard	None	None	None
Line Spacing Display	Single & double	Single & double	Single & double	Single & double
Line Justify Display	Standard	None	None	None
Underscore Display	Standard	Standard	Standard	Standard
Sub/Superscript Display	None	None	Technical typing option	Technical typing option
Multi-Column Page Display	None	None	None	None
Stored Form Recall/Display	None	None	None	None
Control Code Display	None	None	None	None
Format Statement Display	None	None	None	None
<b>PRINTER STATIONS FEATURES</b>				
Printer Type & Speed	IBM Executive 15.5 cps*	Daisy wheel 45 cps	Daisy wheel 45 cps**	Daisy wheel 45 cps
Printer Buffer Memory	—	—	—	—
Character Pitch/Spacing	Proportional	10, 12	10, 12	10, 12
Writing Line Width	12.5" or 16"	13"	13"	13"
Carriage Paper Width	12.5" or 16"	15"	15"	15"
First Line Forms Advance	None	None	None	None
End-Of-Page Stop	None	None	None	None
Justified Printout	Standard	None	None	Standard
Sub/Superscript Printout	Standard	Standard	Standard	Standard
Non-Adjust Printout	Standard	Standard	Standard	Standard
Bidirectional Printout	None	Standard	Standard	Standard
Simultaneous Printout	Standard	Standard	Standard	Standard
<b>GEN. FUNCTIONAL FEATURES</b>				
Media-Stored Format	Standard	Standard	Standard	Standard
Default Format Statement	Margins only	Margins only	Margins only	Margins only
Stored Multiple Formats	None	None	None	None
Machine Dialog/Menu Prompt	Prompts & status messages displayed	Prompts & status messages displayed	Prompts & status messages displayed	Prompts & status messages displayed
Forms Input	None	None	None	None
Control Character Printout	None	None	None	None
Printout Queuing	None	None	None	None
<b>Revision &amp; Status Reporting</b>	None	None	None	None
<b>System Security</b>	Keylock optional	Keylock optional	Keylock optional	Keylock optional
<b>TEXT INPUT FEATURES</b>				
Auto Carrier Return	None	None	None	None
Auto Word Wraparound	None	None	None	None
Auto Margin Adjust	Standard	Standard	Standard	Standard
Temporary Margins	None	None	None	None
<b>Auto Decimal Tab Hyphenation</b>	Optional Manual	Optional Manual	Standard Manual	Standard Manual
<b>REMARKS &amp; OTHER FEATURES</b>	*912 is printer-less; 913 has a Qume high-speed proportional printer	*66 lines x 122 chars. optional (8052 total)	*66 lines x 122 chars. optional (8052 total) **922 is printer-less	*66 lines x 122 chars. optional (8052 total)



## Standalone Word Processing Systems

Lexitron	Lexitron	Lexitron	Lexitron	COMPANY
911/912/913	920	921/922	942	MODEL
None	None	None	None	TEXT INPUT FEATURES(cont'd)
None	None	None	None	Auto Input Underline
Standard	Standard	Standard	Standard	Auto Centering
Standard	Standard	Standard	Standard	Auto Line Spacing
None	None	None	None	Auto Page Numbering
Standard	Standard	Standard	Standard	Auto Headers/Footers
Stored paras. or pages assembled & merged w/ keyboarded text	Stored paras. or pages assembled & merged w/ keyboarded text	Stored paras. or pages assembled & merged w/ keyboarded text	Stored paras. or pages assembled & merged w/ keyboarded text	Auto Pagination
By page number & cursor position C	By page number & cursor position C	By page number & cursor position C	By page number & cursor position C	TEXT EDIT & MERGE FEATURES
None	None	None	None	Document Assembly/Merge
By line or specified block	By line or specified block	By line or specified block	By line or specified block	Search Capability
None	None	None	None	Delete Capability
Standard	Standard	Standard	Standard	Global Search & Replace
None	None	None	None	Block Move/Copy
None	None	None	None	Column Move/Delete
Standard	Standard	Standard	Standard	Auto Repagination
None	None	None	None	Auto Widow Adjust
None	None	None	None	Auto File Sort
One field selection	One field selection	One field selection	One field selection	Auto File Select
None	None	None	None	Auto Footnote Tie-In
None	None	None	None	Term Dictionary/Glossary
Optional Programmable; IBM 2741-compatible or system-to-system	Optional Programmable; IBM 2741-compatible or system-to-system	Optional Programmable; IBM 2741-compatible or system-to-system	Optional Programmable; IBM 2741-compatible or system-to-system	COMMUNICATIONS
None	None	None	None	Availability
None	None	None	None	Format & Speed
None	None	None	None	ARITHMETIC CAPABILITY
None	None	None	None	EDP CAPABILITY
None	None	None	None	Multiprogramming
None	None	None	None	Compilers
Mag card reader	Mag card reader	Mag card reader	OCR, mag card reader	Applications Software
1976 USA	1974 USA	1977 USA		PERIPHERALS
\$15,950	\$17,850 (921)	\$21,995		BACKGROUND INFORMATION
\$515	\$11,950 (922)	\$700		First Delivery Date
\$339 (5-yr)	\$560 (921)	\$495 (5-yr.)		Country of Manufacture
\$65/mo. (911/913)	\$379 (921)	\$75/mo.		Installed Base Estimate
\$60/mo. (912)	\$65/mo. (921)			PRICING & TERMS
90 days	\$50/mo. (922)			Purchase
	90 days			Rental
				Lease
				Maintenance
				Warranty & Support
912, \$11,950	Technical typing option, \$350	Technical typing option, \$350		REMARKS & OTHER FEATURES
913, \$18,950				
1) June printer can be substituted to model 911, \$5,000				

## Standalone Word Processing Systems

COMPANY	Lexitron	Linolex	MCM	Micom
<b>MODEL</b>	941/945	4000	782	2000
<b>SYSTEM CONFIGURATION</b>				
Configuration	Keyboard/CRT/cassette console, printer	Keyboard/CRT, diskette console, printer	Terminal, printer	Keyboard/CRT, diskette console, printer
<b>Memory Size</b>	—	4K	8K	32K
<b>Storage Media</b>	Cassette	Single or dual diskette	Dual cassette	Single or dual diskette
<b>Storage Capacity</b>	200K chars./cassette	180K chars./diskette	40 pages/cassette	300K chars./diskette
<b>DISPLAY STATION FEATURES</b>				
Screen Size & Type	8½" x 11" CRT	11" diagonal CRT	12" diagonal Gas plasma	12" diagonal CRT
Display Buffer Memory	8K chars.	1440 chars.	—	2K chars.
Format & Capacity	66 lines x 85 chars.* (5610 chars. total)	18 lines x 80 chars. (1440 chars. total)	1 line x 32 chars. (32 chars. total)	28 lines x 80 chars. (2240 chars. total)
Character Generation	Stroke writing	5 x 7 dot matrix	5 x 7 dot matrix	7 x 9 dot matrix
Cursor Positioning	Left, right, return	Left, right, home	Left, right	Left, right, up down,
Vertical Scrolling	Standard	None	None	Standard
Horizontal Scrolling	None	Format line only	None	Standard
Page Scrolling	Standard	None	None	None
Display Highlighting	None	None	None	Standard
Character Size Control	None	None	None	None
Character Pitch Display	Standard	None	None	None
Character Spacing Display	None	None	None	None
Line Spacing Display	Single & double	None	None	Standard
Line Justify Display	None	None	None	None
Underscore Display	Technical typing option	Code only	None	Standard
Sub/Superscript Display	None	Code only	None	Standard
Multi-Column Page Display	None	Standard	None	—
Stored Form Recall/Display	None	None	None	—
Control Code Display	None	Standard	None	Standard
Format Statement Display	None	Standard	None	Standard
<b>PRINTER STATIONS FEATURES</b>				
Printer Type & Speed	Daisy wheel 45 cps	Daisy wheel 30 or 45 cps	Diablo daisy 45 cps	Daisy wheel 30 or 55 cps
Printer Buffer Memory	—	—	—	—
Character Pitch/Spacing	10, 12	10 & 12	10, 12	10, 12
Writing Line Width	13"	13"	13"	13" or 26"
Carriage Paper Width	15"	15"	15"	15" or 28"
First Line Forms Advance	None	Standard	Standard	Standard
End-Of-Page Stop	None	Standard	Standard	Standard
Justified Printout	Standard	Standard	Standard	Standard
Sub/Superscript Printout	Standard	Standard	Standard	Standard
Non-Adjust Printout	Standard	Standard	Standard	Standard
Bidirectional Printout	Standard	Standard	Standard	None
Simultaneous Printout	Standard	Standard	None	Standard
<b>GEN. FUNCTIONAL FEATURES</b>				
Media-Stored Format	Standard	Standard	Standard	Standard
Default Format Statement	Margins only	Standard	Standard	Standard
Stored Multiple Formats	None	None	—	Standard
Machine Dialog/Menu Prompt	Prompts & status messages displayed	Extensive menus & operator cueing	Operating cueing	Prompting on display
Forms Input	None	Standard	—	Standard
Control Character Printout	None	Standard	Standard	Standard
Printout Queuing	None	Up to 30 documents	—	Standard
<b>Revision &amp; Status Reporting</b>	None	Standard	—	Machine status display line
<b>System Security</b>	Keylock optional	None	None	None
<b>TEXT INPUT FEATURES</b>				
Auto Carrier Return	None	Standard	Standard	Standard
Auto Word Wraparound	None	Standard	—	Standard
Auto Margin Adjust	Standard	Standard	Standard	Standard
Temporary Margins	None	Left only	—	Standard
<b>Auto Decimal Tab Hyphenation</b>	Optional Manual	None Manual	None Manual	Standard Manual; adjustable Hot Zone
<b>REMARKS &amp; OTHER FEATURES</b>	**66 lines x 122 chars. (8052 chars. total) optional	Matrix printer, 165 cps, also available		

## Standalone Word Processing Systems

Lexitron	Linolex	MCM	Micom	COMPANY
Model 45	4000	782	2000	<b>MODEL</b>
None	Standard	Standard	Standard	<b>TEXT INPUT FEATURES(cont'd)</b>
None	Standard	Standard	Standard	Auto Input Underline
Standard	None	Standard	Standard	Auto Centering
Standard	Standard	Standard	Standard	Auto Line Spacing
Standard	Standard	Standard	Standard	Auto Page Numbering
Standard	Standard	Standard	Standard	Auto Headers/Footers
Standard	Standard	—	Standard	Auto Pagination
Stored text assembled & merged w/keyboarded text to form new document	Stored text assembled & merged w/keyboarded text to form new document	Stored text assembled & merged w/keyboarded text to form new document	Stored text assembled & merged w/keyboarded text to form new document	<b>TEXT EDIT &amp; MERGE FEATURES</b>
By page no. & cursor position	By document name, code & number or char. str. C, W, L, P	By char. string	By page no., char. string & cursor C, W, S, L	Document Assembly/Merge
None	10 search & replace operations simultaneously	Standard; non-global search	Standard	<b>Search Capability</b>
None	Standard	Standard	Standard	<b>Delete Capability</b>
None	Standard	Standard	Standard	<b>Global Search &amp; Replace</b>
None	Standard	Standard	Standard	<b>Block Move/Copy</b>
Standard	Standard	—	Standard	<b>Column Move/Delete</b>
Standard	Standard	—	Standard	<b>Auto Repagination</b>
None	None	None	None	<b>Auto Widow Adjust</b>
None	Standard	Standard	Standard	<b>Auto File Sort</b>
None	Standard	Standard	Standard	<b>Auto File Select</b>
None	None	None	None	<b>Auto Footnote Tie-In</b>
None	None	None	None	<b>Term Dictionary/Glossary</b>
Optional IBM 2741-compatible; IBM 2741- or system-to-printer	Optional IBM 2741-compatible at 110 to 1200 baud, 2780-compat. at 4800 baud	Optional ASCII & IBM Corr.; 110 to 1200 baud	Optional Asynchronous ASCII at 300 to 1200 baud	<b>COMMUNICATIONS</b>
None	—	Full	Full	Availability
None	None	None	None	Format & Speed
None	None	None	None	<b>ARITHMETIC CAPABILITY</b>
None	Assembler	APL	None	<b>EDP CAPABILITY</b>
None	Payroll, billing, general ledger & others	Available	Available	Multiprogramming
None	Mag card reader, computer tape interface, RS-232 devices	Diskette drive, line printers, mag card reader	—	Compilers
None	September 1975	November 1976	June 1976 (Canada)	<b>Applications Software</b>
None	USA	Canada	Canada	<b>PERIPHERALS</b>
None	—	—	100	<b>BACKGROUND INFORMATION</b>
None	\$15,500 (single disk.)	Approx. \$12,000	\$16,400 (dual)	First Delivery Date
None	\$17,500 (dual diskette)	—	\$13,400 (single)	Country of Manufacture
None	Not Available	—	—	Installed Base Estimate
None	\$444 (5-yr.)	—	—	<b>PRICING &amp; TERMS</b>
None	\$501	—	—	Purchase
None	\$80/mo.	—	—	<b>Rental</b>
None	\$90/mo.	—	—	<b>Lease</b>
None	—	—	—	<b>Maintenance</b>
None	—	—	—	<b>Warranty &amp; Support</b>
Model 45 combines 2 display stations, single tape drive, line printer			Can perform editing, sorting & printing of different documents simultaneously. Additional text entry stations, \$9,500, can share printer in cluster configuration	<b>REMARKS &amp; OTHER FEATURES</b>



## Standalone Word Processing Systems

COMPANY	NBI	NBI	OCI	Olivetti
<b>MODEL</b>	System I	System II	Veritext	S-14
<b>SYSTEM CONFIGURATION</b> Configuration	Keyboard, CRT/diskette console, printer	Keyboard, CRT/diskette console, printer	Typewriter	Typewriter, tape console
<b>Memory Size</b>	—	—	—	—
<b>Storage Media</b>	Diskette	Single or dual diskette	Iomec tape cartridge	Tape cartridge
<b>Storage Capacity</b>	234K chars./diskette	250 chars./diskette	61K chars.	250K chars./cartridge
<b>DISPLAY STATION FEATURES</b>				
Screen Size & Type	12" diagonal CRT	12" diagonal CRT	Not Available	Not Available
Display Buffer Memory	4K chars.	4K chars.	Not Available	Not Available
Format & Capacity	16 lines x 80 chars. (1280 chars. total)	16 lines x 80 chars. (1280 chars. total)	Not Available	Not Available
Character Generation	9 x 16 dot matrix	9 x 16 dot matrix	Not Available	Not Available
Cursor Positioning	Left, right, up, down	Left, right, up, down	Not Available	Not Available
Vertical Scrolling	Standard	Standard	Not Available	Not Available
Horizontal Scrolling	None	None	Not Available	Not Available
Page Scrolling	None	None	Not Available	Not Available
Display Highlighting	None	None	Not Available	Not Available
Character Size Control	None	None	Not Available	Not Available
Character Pitch Display	None	None	Not Available	Not Available
Character Spacing Display	None	None	Not Available	Not Available
Line Spacing Display	None	None	Not Available	Not Available
Line Justify Display	None	None	Not Available	Not Available
Underscore Display	Standard	Standard	Not Available	Not Available
Sub/Superscript Display	Code only	Code only	Not Available	Not Available
Multi-Column Page Display	None	None	Not Available	Not Available
Stored Form Recall/Display	None	Standard	Not Available	Not Available
Control Code Display	Standard	Standard	Not Available	Not Available
Format Statement Display	Standard	Standard	Not Available	Not Available
<b>PRINTER STATIONS FEATURES</b>				
Printer Type & Speed	Daisy wheel 30 cps*	Daisy 30, 40 or 55 cps	Qume daisy 30 or 45 cps	Olivetti Editor 4/4C
Printer Buffer Memory	Prints from diskette	Prints from diskette	—	1 line
Character Pitch/Spacing	10, 12	10, 12, proportional*	10 & 12	10, 12
Writing Line Width	15"	15"	13.2"	12" or 16½"
Carriage Paper Width	15"	15"	14"	13" or 18"
First Line Forms Advance	Standard	Standard	Standard	Standard
End-Of-Page Stop	Standard	Standard	Standard	Standard
Justified Printout	None	Optional*	Standard	Standard
Sub-Superscript Printout	Standard	Standard	Standard	Standard
Non-Adjust Printout	Standard	Standard	None	Standard
Bidirectional Printout	Standard	Standard	Standard	None
Simultaneous Printout	Standard	Standard	None	None
<b>GEN. FUNCTIONAL FEATURES</b>				
Media-Stored Format	Standard	Standard	Standard	Optional
Default Format Statement	Margins only	Margins only	Standard	Standard
Stored Multiple Formats	None	Standard	None	None
Machine Dialog/Menu Prompt	Status & error messages, cues displayed	Status & error messages, cues displayed	None	None
Forms Input	None	Standard	None	None
Control Character Printout	Standard	Standard	Standard	Line nos. only
Printout Queuing	None	Standard	None	None
<b>Revision &amp; Status Reporting</b>	Diskette directory has doc. revision status	Diskette directory has doc. revision status	None	None
<b>System Security</b>	Keylock	Keylock	None	None
<b>TEXT INPUT FEATURES</b>				
Auto Carrier Return	Standard	Standard	Standard	Standard
Auto Word Wraparound	None	Standard	None	None
Auto Margin Adjust	Standard	Standard	Standard	Standard
Temporary Margins	None	Standard	None	Optional
<b>Auto Decimal Tab Hyphenation</b>	Optional Manual; adjustable Hot Zone	Standard Ghost hyphens & manual; adjustable Hot Zone	Standard Manual; adjustable Hot Zone	Optional Algorithm or manual; full-line Hot Zone
<b>REMARKS &amp; OTHER FEATURES</b>	*55 cps daisy wheel available, \$1,300	*Only on 40 cps printer Dual diskette optional, \$2,500		MEM-14 software package to upgrade to S-24 functions, \$750

## Standalone Word Processing Systems

	NBI	OCI	Olivetti	COMPANY
	System II	Veritext	S-14	<b>MODEL</b>
	Standard	Standard	Standard	<b>TEXT INPUT FEATURES(cont'd)</b>
	Standard	Standard	Standard	Auto Input Underline
	Standard	Standard	None	Auto Centering
	Standard	Standard	None	Auto Line Spacing
	Top or bottom	None	None	Auto Page Numbering
	Standard	None	None	Auto Headers/Footers
	Standard	None	None	Auto Pagination
	Text from either diskette assembled & merged w/keyboarded text to form new document	Stored text edited & merged w/keyboarded text in one page segments	Optional text linking; stored text merged w/keyboarded text	<b>TEXT EDIT &amp; MERGE FEATURES</b>
	By page & line no., or char. string	By page no. & char. string	By skipping C, W, L, S or P	Document Assembly/Merge
	C, W, L or specified block	C, W, S, P, Page	C, W, L, S, P	<b>Search Capability</b>
	Standard	None	None	<b>Delete Capability</b>
				<b>Global Search &amp; Replace</b>
	Standard	None	None	<b>Block Move/Copy</b>
	None	None	None	<b>Column Move/Delete</b>
	Standard	None	Standard	<b>Auto Repagination</b>
	Standard	None	None	<b>Auto Widow Adjust</b>
	Optional	None	None	<b>Auto File Sort</b>
	Optional	None	Optional	<b>Auto File Select</b>
	Standard	None	None	<b>Auto Footnote Tie-In</b>
	Standard	None	None	<b>Term Dictionary/Glossary</b>
	Optional, \$850	None	None	<b>COMMUNICATIONS</b>
	Full duplex asynchronous	—	—	Availability
	ASCII	—	—	Format & Speed
	Full	None	None	<b>ARITHMETIC CAPABILITY</b>
	None	None	None	<b>EDP CAPABILITY</b>
	Versidat; user programming supported	None	None	Multiprogramming
	Legal time accounting	None	None	Compilers
	OCR, photocomposer	None	Mag card reader	<b>Applications Software</b>
				<b>PERIPHERALS</b>
	September 1975	July 1975	—	<b>BACKGROUND INFORMATION</b>
	USA	USA	—	First Delivery Date
	—	—	1,000	Country of Manufacture
	\$15,490	\$8,995	\$7,495	Installed Base Estimate
	—	\$325 (12-mo.)	\$240*	<b>PRICING &amp; TERMS</b>
	\$455 (3-yr.)	Third-party leasing	\$200 (5-yr.)	Purchase
	\$75/mo.	\$55 (one-time installation fee)	\$40/mo.	<b>Rental</b>
	90 days	—	—	<b>Lease</b>
				<b>Maintenance</b>
				<b>Warranty &amp; Support</b>
Extended WP \$1,300			*Includes maintenance	<b>REMARKS &amp; OTHER FEATURES</b>

## Standalone Word Processing Systems

COMPANY	Olivetti	Olivetti	Philips	Q1
<b>MODEL</b>	S-24	TES-501	WPS	Q1/LMC
<b>SYSTEM CONFIGURATION Configuration</b>	Typewriter, tape console	Keyboard/display/diskette console	Keyboard/CRT, card console, printer	Keyboard/display, diskette console, printer
<b>Memory Size</b>	—	—	—	—
<b>Storage Media</b>	Tape cartridge	Dual diskette	Magnetic card	Dual diskette
<b>Storage Capacity</b>	250K chars./cartridge	325K chars./diskette	5K chars./card	500K chars./diskette
<b>DISPLAY STATION FEATURES</b>				
<b>Screen Size &amp; Type</b>	Not Available	1" x 8" Gas plasma	15" diagonal CRT	Gas plasma
<b>Display Buffer Memory</b>	Not Available	180 chars.	61 lines	—
<b>Format &amp; Capacity</b>	Not Available	1 line x 21 chars. (21 chars. total)	24 lines x 100 chars. (2400 chars. total)	6 lines x 47 chars. or 12 lines x 47 chars.
<b>Character Generation</b>	Not Available	5 x 12 dot matrix	7 x 11 dot matrix	5 x 7 dot matrix
<b>Cursor Positioning</b>	Not Available	Left, right	Left, right, up, down, home	Left, right, up, down
<b>Vertical Scrolling</b>	Not Available	None	Standard	Standard
<b>Horizontal Scrolling</b>	Not Available	None	Standard to 125 chars.	None
<b>Page Scrolling</b>	Not Available	None	None	None
<b>Display Highlighting</b>	Not Available	None	Standard	None
<b>Character Size Control</b>	Not Available	None	None	None
<b>Character Pitch Display</b>	Not Available	None	None	None
<b>Character Spacing Display</b>	Not Available	None	None	None
<b>Line Spacing Display</b>	Not Available	None	None	None
<b>Line Justify Display</b>	Not Available	None	None	None
<b>Underscore Display</b>	Not Available	None	Standard	Code only
<b>Sub/Superscript Display</b>	Not Available	None	Code only	Code only
<b>Multi-Column Page Display</b>	Not Available	None	None	None
<b>Stored Form Recall/Display</b>	Not Available	None	None	None
<b>Control Code Display</b>	Not Available	None	—	Standard
<b>Format Statement Display</b>	Not Available	None	Standard	Standard
<b>PRINTER STATIONS FEATURES</b>				
<b>Printer Type &amp; Speed</b>	Olivetti Editor 4 or 4C	Olivetti daisy 30 cps	Daisy wheel 45 cps*	Diablo daisy 45 cps
<b>Printer Buffer Memory</b>	1 line	—	—	—
<b>Character Pitch/Spacing</b>	10, 12	10, 12, proportional	10 & 12	10, 12, 15
<b>Writing Line Width</b>	12" or 16½"	15"	13"	13.5"
<b>Carriage Paper Width</b>	13" or 18"	17"	15"	15"
<b>First Line Forms Advance</b>	Standard	Standard	Standard	Standard
<b>End-Of-Page Stop</b>	Standard	Standard	Standard	Standard
<b>Justified Printout</b>	Standard	Standard; interchar. sp.	Standard; interword sp.	Standard
<b>Sub/Superscript Printout</b>	Standard	Standard	Standard	Standard
<b>Non-Adjust Printout</b>	Standard	Standard	Standard	Standard
<b>Bidirectional Printout</b>	None	None	Standard	Standard
<b>Simultaneous Printout</b>	None	Standard	Standard	Standard
<b>GEN. FUNCTIONAL FEATURES</b>				
<b>Media-Stored Format</b>	Standard	None	Standard	None
<b>Default Format Statement</b>	Standard	None	Standard	Standard
<b>Stored Multiple Formats</b>	None	None	None	None
<b>Machine Dialog/Menu Prompt</b>	None	None	—	Limited cueing
<b>Forms Input</b>	None	None	None	—
<b>Control Character Printout</b>	Line nos. only	Standard	None	None
<b>Printout Queuing</b>	None	None	Prints from screen or card	None
<b>Revision &amp; Status Reporting</b>	None	Machine mode on display	None	—
<b>System Security</b>	None	None	—	File protect
<b>TEXT INPUT FEATURES</b>				
<b>Auto Carrier Return</b>	None	Standard	Standard	—
<b>Auto Word Wraparound</b>	None	Standard	Standard	Standard
<b>Auto Margin Adjust</b>	Standard	Standard	Standard	—
<b>Temporary Margins</b>	Standard	Standard	None	Standard
<b>Auto Decimal Tab</b>	Standard	Standard	Standard	Standard
<b>Hyphenation</b>	Algorithm or manual; full-line Hot Zone	Manual; full-line Hot Zone	Manual	Manual
<b>REMARKS &amp; OTHER FEATURES</b>			*55 cps printer optional	

## Standalone Word Processing Systems

	Olivetti	Philips	Q1	COMPANY
	<p>TES-501</p> <p>Standard Standard</p> <p>Standard None None None</p> <p>Stored text from either diskette assembled &amp; merged w/keyboarded text By skipping C, W, L, P; or by char. string C, W, L, P</p> <p>Standard; manual replacement or deletion</p> <p>None</p> <p>None</p> <p>Standard</p> <p>None</p> <p>Standard</p> <p>Up to 6 fields selected simultaneously* None None</p> <p>To be announced —</p> <p>Column addition</p> <p>None None</p> <p>None</p> <p>Sheet feeder</p> <p>May 1977 Italy —</p> <p>\$8,445</p> <p>\$290</p> <p>\$255 (5-yr.)</p> <p>—</p> <p>—</p>	<p>WPS</p> <p>None Standard</p> <p>Standard None None None</p> <p>Text from card merged w/keyboarded text</p> <p>By char. string &amp; cursor position C, L, specified block</p> <p>Standard, max. 64-char. string; manual replacement; non-global search</p> <p>Standard</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>December 1976 Germany —</p> <p>\$17,400</p> <p>\$500*</p> <p>\$392 (5-yr.)*</p> <p>\$870</p> <p>—</p> <p>*Includes maintenance</p>	<p>Q1/LMC</p> <p>Standard Standard</p> <p>Standard Standard Standard None</p> <p>Stored text assembled &amp; merged w/keyboarded text to form new document Char. string C, W, L, P</p> <p>Standard</p> <p>Standard</p> <p>Standard</p> <p>Standard</p> <p>Standard</p> <p>None</p> <p>Single field selection</p> <p>Standard None</p> <p>Optional, \$1,250 Asynchronous or bisynchronous ASCII at up to 9600 baud Optional</p> <p>Optional PL/1</p> <p>None</p> <p>Line printers, 300 to 600 lpm</p> <p>January 1975 USA 300</p> <p>\$15,150</p> <p>Not Available</p> <p>\$365 (5-yr.)</p> <p>8% per year</p> <p>30 days</p>	<p>MODEL</p> <p>TEXT INPUT FEATURES (cont'd) Auto Input Underline Auto Centering</p> <p>Auto Line Spacing Auto Page Numbering Auto Headers/Footers Auto Pagination TEXT EDIT &amp; MERGE FEATURES Document Assembly/Merge</p> <p>Search Capability</p> <p>Delete Capability</p> <p>Global Search &amp; Replace</p> <p>Block Move/Copy</p> <p>Column Move/Delete</p> <p>Auto Repagination</p> <p>Auto Widow Adjust</p> <p>Auto File Sort</p> <p>Auto File Select</p> <p>Auto Footnote Tie-In Term Dictionary/Glossary</p> <p>COMMUNICATIONS Availability Format &amp; Speed</p> <p>ARITHMETIC CAPABILITY EDP CAPABILITY Multiprogramming Compilers</p> <p>Applications Software</p> <p>PERIPHERALS</p> <p>BACKGROUND INFORMATION First Delivery Date Country of Manufacture Installed Base Estimate PRICING &amp; TERMS Purchase</p> <p>Rental</p> <p>Lease</p> <p>Maintenance</p> <p>Warranty &amp; Support</p> <p>REMARKS &amp; OTHER FEATURES</p>



## Standalone Word Processing Systems

COMPANY	Qualterm	Redactron	Redactron	Redactron
<b>MODEL</b>	Typing Power 55	Single Card-B	Dual Card-B	Single <b>Tape-B</b>
<b>SYSTEM CONFIGURATION</b> Configuration	Typewriter, diskette	Typewriter, card console	Typewriter, card console	Typewriter, <b>tape</b> console
<b>Memory Size</b>	—	—	—	—
<b>Storage Media</b>	Diskette	Magnetic card	Dual Magnetic card	Cassette
<b>Storage Capacity</b>	311K chars./diskettes	5K chars./card	5K chars./card	80K chars./cassette
<b>DISPLAY STATION FEATURES</b>				
Screen Size Type	Not Available	Not Available	Not Available	Not Available
Display Buffer Memory	Not Available	Not Available	Not Available	Not Available
Format & Capacity	Not Available	Not Available	Not Available	Not Available
<b>Character Generation</b>	Not Available	Not Available	Not Available	Not Available
<b>Cursor Positioning</b>	Not Available	Not Available	Not Available	Not Available
<b>Vertical Scrolling</b>	Not Available	Not Available	Not Available	Not Available
<b>Horizontal Scrolling</b>	Not Available	Not Available	Not Available	Not Available
<b>Page Scrolling</b>	Not Available	Not Available	Not Available	Not Available
<b>Display Highlighting</b>	Not Available	Not Available	Not Available	Not Available
<b>Character Size Control</b>	Not Available	Not Available	Not Available	Not Available
<b>Character Pitch Display</b>	Not Available	Not Available	Not Available	Not Available
<b>Character Spacing Display</b>	Not Available	Not Available	Not Available	Not Available
<b>Line Spacing Display</b>	Not Available	Not Available	Not Available	Not Available
<b>Line Justify Display</b>	Not Available	Not Available	Not Available	Not Available
<b>Underscore Display</b>	Not Available	Not Available	Not Available	Not Available
<b>Sub-/Superscript Display</b>	Not Available	Not Available	Not Available	Not Available
<b>Multi-Column Page Display</b>	Not Available	Not Available	Not Available	Not Available
<b>Stored Form Recall/Display</b>	Not Available	Not Available	Not Available	Not Available
<b>Control Code Display</b>	Not Available	Not Available	Not Available	Not Available
<b>Format Statement Display</b>	Not Available	Not Available	Not Available	Not Available
<b>PRINTER STATIONS FEATURES</b>				
Printer Type & Speed	Qume daisy 55 cps	IBM Selectric 15.5 cps	IBM Selectric 15.5 cps	IBM Selectric 15.5 cps
Printer Buffer Memory	128 chars.	—	—	—
Character Pitch/Spacing	10, 12	10, 12	10, 12	10, 12
Writing Line Width	13"	13"	13"	13"
Carriage Paper Width	15"	15.5"	15.5"	15.5"
First Line Forms Advance	Standard	None	None	None
End-Of-Page Stop	Standard	Standard	Standard	Standard
Justified Printout	Standard	None	None	None
Sub-/Superscript Printout	—	None	None	None
Non-Adjust Printout	—	Standard	Standard	Standard
Bidirectional Printout	Standard	None	None	None
Simultaneous Printout	None	None	None	None
<b>GEN. FUNCTIONAL FEATURES</b>				
Media-Stored Format	Standard	None	None	None
Default Format Statement	—	None	None	None
Stored Multiple Formats	—	None	None	None
Machine Dialog/Menu Prompt	None	None	None	None
<b>Forms Input</b>	Standard	—	—	—
Control Character Printout	Standard	Standard	Standard	Standard
Printout Queuing	None	None	None	None
<b>Revision &amp; Status Reporting</b>	None	None	None	None
<b>System Security</b>	None	—	—	—
<b>TEXT INPUT FEATURES</b>				
Auto Carrier Return	None	None	None	None
Auto Word Wraparound	None	None	None	None
Auto Margin Adjust	Standard	Standard	Standard	Standard
Temporary Margins	Standard	—	—	—
<b>Auto Decimal Tab</b>	None	None	None	None
<b>Hyphenation</b>	Manual; adjustable Hot Zone	Manual; 7-char. Hot Zone	Manual; 7-char. Hot Zone	Manual; 7-char. Hot Zone
<b>REMARKS &amp; OTHER FEATURES</b>				

## Standalone Word Processing Systems

Qualterm	Redactron	Redactron	Redactron	COMPANY
Power 55	Single Card-B	Dual Card-B	Single Tape-B	MODEL
	Standard	Standard	Standard	TEXT INPUT FEATURES (cont'd)
	Standard	Standard	Standard	Auto Input Underline
	None	None	None	Auto Centering
	None	None	None	Auto Line Spacing
	None	None	None	Auto Page Numbering
	None	None	None	Auto Headers/Footers
	None	None	None	Auto Pagination
Stored text merged with keyboared text	Stored text merged with keyboared text	Text from each card as- sembled & merged w/key- boared text	Text from tape merged w/keyboared text	TEXT EDIT & MERGE FEATURES
				Document Assembly/Merge
Search for file name	Search for Stop codes	Search for Stop codes	Search for Stop codes	Search Capability
	C, L	C, L	C, L	Delete Capability
	Standard; manual re- placement or deletion; non-global	Standard; manual re- placement or deletion; non-global	Standard; manual re- placement or deletion; non-global	Global Search & Replace
	None	None	None	Block Move/Copy
	None	None	None	Column Move/Delete
	None	None	None	Auto Repagination
	None	None	None	Auto Widow Adjust
	None	None	None	Auto File Sort
	None	None	None	Auto File Select
	None	None	None	Auto Footnote Tie-In
	None	None	None	Term Dictionary/Glossary
	Optional	Optional	Optional	COMMUNICATIONS
	Synchronous EBCDIC, ASCII, TWX or Telex at 150 to 300 cps	Synchronous EBCDIC, ASCII, TWX or Telex at 150 to 300 cps	Synchronous EBCDIC, ASCII, TWX or Telex at 150 to 300 cps	Availability
	None	None	None	Format & Speed
	None	None	None	ARITHMETIC CAPABILITY
	None	None	None	EDP CAPABILITY
	None	None	None	Multiprogramming
	None	None	None	Compilers
	None	None	None	Applications Software
Computer tape interface	Computer tape interface	Computer tape interface	Computer tape interface	PERIPHERALS
	November 1971	November 1971	November 1971	BACKGROUND INFORMATION
	USA	USA	USA	First Delivery Date
	—	—	—	Country of Manufacture
	—	—	—	Installed Base Estimate
	\$7,400	\$9,200	\$7,400	PRICING & TERMS
	\$205	\$295	\$205	Purchase
	\$190 (2-yr.)	\$267 (2-yr.)	\$190 (2-yr.)	Rental
	—	—	—	Lease
	—	—	—	Maintenance
	—	—	—	Warranty & Support
can also be used as a printer multiple display				REMARKS & OTHER FEATURES

## Standalone Word Processing Systems

COMPANY	Redactron	Redactron	Redactron	Redactron
<b>MODEL</b>	Dual Tape-B	Power Typewriter-B	Dual Media-B	Redactor II
<b>SYSTEM CONFIGURATION</b> Configuration	Typewriter, tape console	Typewriter	Typewriter, media console	Keyboard/CRT/tape console, printer
<b>Memory Size</b>	—	—	—	—
<b>Storage Media</b>	Dual cassette	Magnetic card	Cassette & magnetic card	Dual cassette*
<b>Storage Capacity</b>	80K chars./cassette	5K chars./card	5K-card/80K-cassette	80K chars./cassette
<b>DISPLAY STATION FEATURES</b>				
Screen Size & Type	Not Available	Not Available	Not Available	8" x 11" CRT
Display Buffer Memory	Not Available	Not Available	Not Available	5K chars., optional 9K
Format & Capacity	Not Available	Not Available	Not Available	60 lines x 70 chars. (10 p.), x 84 chars. (12 p.)
Character Generation	Not Available	Not Available	Not Available	8 x 12 dot matrix
Cursor Positioning	Not Available	Not Available	Not Available	Left, right, up, down
Vertical Scrolling	Not Available	Not Available	Not Available	Up to 98 lines
Horizontal Scrolling	Not Available	Not Available	Not Available	Up to 158 chars.
Page Scrolling	Not Available	Not Available	Not Available	Standard
Display Highlighting	Not Available	Not Available	Not Available	Flash, reverse, intensify
Character Size Control	Not Available	Not Available	Not Available	Standard
Character Pitch Display	Not Available	Not Available	Not Available	Standard
Character Spacing Display	Not Available	Not Available	Not Available	None
Line Spacing Display	Not Available	Not Available	Not Available	1, 2, 3
Line Justify Display	Not Available	Not Available	Not Available	Standard
Underscore Display	Not Available	Not Available	Not Available	Standard
Sub/Superscript Display	Not Available	Not Available	Not Available	Standard
Multi-Column Page Display	Not Available	Not Available	Not Available	None
Stord Form Recall/Display	Not Available	Not Available	Not Available	Standard
Control Code Display	Not Available	Not Available	Not Available	Standard
Format Statement Display	Not Available	Not Available	Not Available	None
<b>PRINTER STATIONS FEATURES</b>				
Printer Type & Speed	IBM Selectric 15.5 cps	IBM Selectric 15.5 cps	IBM Selectric 15.5 cps	Daisy wheel 55 cps**
Printer Buffer Memory	—	—	—	4K chars.
Character Pitch/Spacing	10, 12	10, 12	10, 12	10, 12, proportional
Writing Line Width	13"	13"	13"	13.2"
Carriage Paper Width	15.5"	15.5"	15.5"	15"
First Line Forms Advance	None	None	None	Standard
End-Of-Page Stop	—	—	—	—
Justified Printout	None	None	None	Standard
Sub/Superscript Printout	None	None	None	Standard
Non-Adjust Printout	Standard	Standard	None	Standard
Bidirectional Printout	None	None	None	Standard
Simultaneous Printout	None	None	None	Standard
<b>GEN. FUNCTIONAL FEATURES</b>				
Media-Stored Format	None	None	None	Standard
Default Format Statement	None	None	None	Standard
Stored Multiple Formats	None	None	None	Standard
Machine Dialog/Menu Prompt	None	None	None	Error messages
Forms Input	—	—	—	Standard***
Control Character Printout	Standard	Standard	Standard	Standard
Printout Queuing	None	None	None	None
Revision & Status Reporting	None	None	None	Document index w/productivity reports
System Security	—	None	None	None
<b>TEXT INPUT FEATURES</b>				
Auto Carrier Return	None	None	None	Standard
Auto Word Wraparound	None	None	None	Standard
Auto Margin Adjust	Standard	Standard	Standard	Standard
Temporary Margin	—	—	—	Standard
Auto Decimal Tab	None	None	None	Standard
Hyphenation	Manual; 7-char. Hot Zone	Manual; 7-char. Hot Zone	Manual; 7-char. Hot Zone	Manual; adjustable Hot Zone
<b>REMARKS &amp; OTHER FEATURES</b>				*Also dual card & dual media (card + cassette) models **Line printer avail. ***User-programmable forms input optional

## Standalone Word Processing Systems

Redactron	Redactron	Redactron	Redactron	COMPANY
Dual Type-B	Power Typewriter-B	Dual Media-B	Redactor II	MODEL
Standard	Standard	Standard	Standard; also double	TEXT INPUT FEATURES (cont'd)
Standard	Standard	Standard	Between margins or about	Auto Input Underline
None	None	None	any point	Auto Centering
None	None	None	Standard	Auto Line Spacing
None	None	None	Standard	Auto Page Numbering
None	None	None	Standard	Auto Headers/Footers
Standard text assembled	None	Lists or inserts from	Stored text assembled &	Auto Repagination
merged w/keyboarded	None	card merged w/text from	merged w/keyboarded	TEXT EDIT & MERGE FEATURES
For stop codes	None	tape	text	Document Assembly/Merge
For stop codes	None	For stop codes	For stop codes	Search Capability
Standard manual re-	None	—	C, W, L, P, Page	Delete Capability
placement	None	Standard; manual re-	Optional; max. 64-char.	Global Search & Replace
None	None	placement	string	
None	None	None	500 char. max.; optional	Block Move/Copy
None	None	None	3850 char. max.	Column Move/Delete
None	None	None	Entry or deletion only	
None	None	None	Standard	Auto Repagination
None	None	None	Standard	Auto Widow Adjust
None	None	None	None	Auto File Sort
None	None	None	None	Auto File Select
None	None	None	Standard	Auto Footnote Tie-In
None	None	None	None	Term Dictionary/Glossary
None	None	None	None	
None	None	Optional	None	COMMUNICATIONS
None	None	Synchronous EBDIC,	—	Availability
None	None	ASCII, TWX or Telex,	Column totaling	Format & Speed
None	None	at 150 to 300 cps	None	ARITHMETIC CAPABILITY
None	None	None	None	EDP CAPABILITY
None	None	None	None	Multiprogramming
None	None	None	None	Compilers
None	None	None	None	Applications Software
Printer tape interface	None	Computer tape interface,	Line printer, photo-	PERIPHERALS
		photocomposition	composition	
1971	April 1973	April 1973	January 1977	BACKGROUND INFORMATION
	USA	USA	USA	First Delivery Date
	—	—	—	Country of Manufacture
	\$5,850	\$9,400	\$10,500 w/o printer	Installed Base Estimate
	\$180	\$340	\$340	PRICING & TERMS
	Not Available	\$310 (2-yr.)	—	Purchase
	—	—	\$40/mo.	Rental
	—	—	—	Lease
				Maintenance
				Warranty & Support
				REMARKS & OTHER FEATURES



## Standalone Word Processing Systems

COMPANY	Savin	Trendata	Trendata	Tycom
<b>MODEL</b>	900 Word Master	1500	4000	Editerm I
<b>SYSTEM CONFIGURATION</b>				
Configuration	Typewriter, cassette console	Keyboard/cassette console	Keyboard/cassette console	Keyboard/CRT, cassette console, printer
<b>Memory Size</b>	—	—	—	—
<b>Storage Media</b>	Cassette	Cassette	Cassette	Cassette
<b>Storage Capacity</b>	50K or 100K chars./cass.	30K chars./cassette	55K chars./cassette	100K chars./cassette
<b>DISPLAY STATION FEATURES</b>				
Screen Size & Type	Not Available	Not Available	Not Available	14" diagonal CRT
Display Buffer Memory	Not Available	Not Available	Not Available	—
Format & Capacity	Not Available	Not Available	Not Available	25 lines x 80 chars. (2000 chars. total)
<b>Character Generation</b>	Not Available	Not Available	Not Available	5 x 7 dot matrix
<b>Cursor Positioning</b>	Not Available	Not Available	Not Available	Left, right, up, down
<b>Vertical Scrolling</b>	Not Available	Not Available	Not Available	Standard
<b>Horizontal Scrolling</b>	Not Available	Not Available	Not Available	None
<b>Page Scrolling</b>	Not Available	Not Available	Not Available	None
<b>Display Highlighting</b>	Not Available	Not Available	Not Available	Standard
<b>Character Size Control</b>	Not Available	Not Available	Not Available	None
<b>Character Pitch Display</b>	Not Available	Not Available	Not Available	None
<b>Character Spacing Display</b>	Not Available	Not Available	Not Available	None
<b>Line Spacing Display</b>	Not Available	Not Available	Not Available	None
<b>Line Justify Display</b>	Not Available	Not Available	Not Available	None
<b>Underscore Display</b>	Not Available	Not Available	Not Available	Standard
<b>Sub/Superscript</b>	Not Available	Not Available	Not Available	None
<b>Multi-Column Page Display</b>	Not Available	Not Available	Not Available	None
<b>Stored Form Recall/Display</b>	Not Available	Not Available	Not Available	None
<b>Control Code Display</b>	Not Available	Not Available	Not Available	Standard
<b>Format Statement Display</b>	Not Available	Not Available	Not Available	Standard
<b>PRINTER STATIONS FEATURES</b>				
Printer Type & Speed	IBM Selectric 15.5 cps	IBM Selectric 15.5 cps	Diablo daisy 30 cps	IBM Selectric 15.5 cps
Printer Buffer Memory	200 chars	—	—	—
Character Pitch/Spacing	10, 12 or 10 & 12	10, 12	10, 12	10, 12
Writing Line Width	13"	13"	15"	13"
Carriage Paper Width	15.5"	15.5"	17"	15"
First Line Forms Advance	Standard	None	—	Standard
End-Of-Page Stop	Standard	Standard	—	Standard
Justified Printout	None	None	None	Standard
Sub/Superscript Printout	None	None	—	Standard
Non-Adjust Printout	Standard	Standard	Standard	Standard
Bidirectional Printout	None	None	Standard	None
Simultaneous Printout	None	None	None	None
<b>GEN. FUNCTIONAL FEATURES</b>				
Media-Stored Format	None	Standard	Standard	Standard
Default Format Statement	None	None	None	None
Stored Multiple Formats	None	None	None	None
Machine Dialog/Menu Prompt	None	None	None	None
<b>Forms Input</b>	None	None	—	None
<b>Control Character Printout</b>	Standard	None	Standard	Standard
<b>Printout Queuing</b>	None	None	None	None
<b>Revision &amp; Status Reporting</b>	None	None	—	None
<b>System Security</b>	None	Optional lock for comm.	None	None
<b>TEXT INPUT FEATURES</b>				
Auto Carrier Return	None	None	—	Standard
Auto Word Wraparound	None	None	—	None
Auto Margin Adjust	Standard	None	Standard	Standard
Temporary Margins	None	None	—	Standard
<b>Auto Decimal Tab</b>	None	None	—	Standard
<b>Hyphenation</b>	Manual; 4 or 8 char. Hot Zone	Manual	Manual	Manual; adjustable Hot Zone
<b>REMARKS &amp; OTHER FEATURES</b>				

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## Standalone Word Processing Systems

COMPANY	Tycom	Tycom	Ty-Data	Ty-Data
<b>MODEL</b>	Editerm II	Video Information Processor	Editor 3600/1	Editor 3600/2P
<b>SYSTEM CONFIGURATION</b> Configuration	Keyboard/CRT, diskette console, printer	Keyboard/CRT, diskette console, printer	Typewriter/cassette console	Typewriter/cassette console
<b>Memory Size</b>	—	—	—	—
<b>Storage Media</b>	Diskette	Diskette	Cassette	Dual cassette
<b>Storage Capacity</b>	256K chars./diskette	256K char./diskette	120K chars./cassette	120K chars./diskette
<b>DISPLAY STATION FEATURES</b>				
<b>Screen Size &amp; Type</b>	14" diagonal CRT	15" diagonal CRT	Not Available	Not Available
<b>Display Buffer Memory</b>	—	—	Not Available	Not Available
<b>Format &amp; Capacity</b>	25 lines x 80 chars. (2000 chars. total) 5 x 7 dot matrix	24 lines x 80 chars. (1920 chars. total) 7 x 9 dot matrix	Not Available	Not Available
<b>Character Generation</b>	Left, right, up, down	Left, right, up, down, home	Not Available	Not Available
<b>Cursor Positioning</b>	Standard	Standard	Not Available	Not Available
<b>Vertical Scrolling</b>	None	None	Not Available	Not Available
<b>Horizontal Scrolling</b>	None	None	Not Available	Not Available
<b>Page Scrolling</b>	None	None	Not Available	Not Available
<b>Display Highlighting</b>	Standard	Standard	Not Available	Not Available
<b>Character Size Control</b>	None	None	Not Available	Not Available
<b>Character Pitch Display</b>	None	None	Not Available	Not Available
<b>Character Spacing Display</b>	None	None	Not Available	Not Available
<b>Line Spacing Display</b>	None	None	Not Available	Not Available
<b>Line Justify Display</b>	None	None	Not Available	Not Available
<b>Underscore Display</b>	Standard	Standard	Not Available	Not Available
<b>Sub/Superscript Display</b>	None	Standard	Not Available	Not Available
<b>Multi-Column Page Display</b>	None	None	Not Available	Not Available
<b>Stored Form Recall/Display</b>	None	None	Not Available	Not Available
<b>Control Code Display</b>	Standard	Standard	Not Available	Not Available
<b>Format Statement Display</b>	Standard	Standard	Not Available	Not Available
<b>PRINTER STATIONS FEATURES</b>				
<b>Printer Type &amp; Speed</b>	IBM Selectric 15.5 cps	IBM Selectric 15.5 cps*	IBM Selectric 15.5 cps	IBM Selectric 15.5 cps
<b>Printer Buffer Memory</b>	—	—	—	—
<b>Character Pitch/Spacing</b>	10, 12	10, 12, 10 & 12	10, 12	10, 12
<b>Writing Line Width</b>	13"	13" or 15"	13"	13"
<b>Carriage Paper Width</b>	15"	15" or 18"	15.5"	15.5"
<b>First Line Forms Advance</b>	Standard	Standard	Standard	Optional
<b>End-Of-Page Stop</b>	Standard	Standard	Standard	Standard
<b>Justified Printout</b>	Standard	Standard	Standard	Standard
<b>Sub/Superscript Printout</b>	Standard	Standard	Standard	Standard
<b>Non-Adjust Printout</b>	Standard	Standard	Standard	Standard
<b>Bidirectional Printout</b>	None	None	None	None
<b>Simultaneous Printout</b>	None	Standard	None	None
<b>GEN. FUNCTIONAL FEATURES</b>				
<b>Media-Stored Format</b>	Standard	Standard	None	None
<b>Default Format Statement</b>	None	Standard	None	None
<b>Stored Multiple Formats</b>	None	Standard	None	None
<b>Machine Dialog/Menu Prompt</b>	None	—	None	None
<b>Firms Input</b>	None	Standard	None	None
<b>Control Character Printout</b>	Standard	Standard	None	None
<b>Printout Queuing</b>	None	Standard	None	None
<b>Revision &amp; Status Reporting</b>	None	None	None	None
<b>System Security</b>	None	None	None	None
<b>TEXT INPUT FEATURES</b>				
<b>Auto Carrier Return</b>	Standard	None	Standard	Standard
<b>Auto Word Wraparound</b>	None	Standard	None	None
<b>Auto Margin Adjust</b>	Standard	Standard	Standard	Standard
<b>Temporary Margins</b>	Standard	Standard	None	None
<b>Auto Decimal Tab</b>	Standard	To be announced	None	None
<b>Hyphenation</b>	Manual; adjustable Hot Zone	Manual; adjustable Hot Zone	Manual; 7-char. Hot Zone	Manual; 7-char. Hot Zone
<b>REMARKS &amp; OTHER FEATURES</b>		*Diablo daisy & line printers also avail.		

## Standalone Word Processing Systems

Tycom	Tycom	Ty-Data	Ty-Data	COMPANY
	Video Info. Processor	Editor 3600/1	Editor 3600/2P	MODEL
	Standard	None	None	TEXT INPUT FEATURES (cont'd)
	Standard	None	None	Auto Input Underline
				Auto Centering
	None	None	None	Auto Line Spacing
	None	None	None	Auto Page Numbering
	None	None	None	Auto Headers/Footers
	None	None	None	Auto Pagination
				TEXT EDIT & MERGE FEATURES
	Stored text merged w/ keyboarded text to form new document	Stored text merged w/ keyboarded text to form new document	Stored text assembled & merged w/keyboarded text to form new document	Document Assembly/Merge
	By file name, char. string & cursor pos. C, W, L, S, P, & speci- field block	By reference codes	By reference codes	Search Capability
	Standard; 64-char. max. string	C, W, L	C, W, L	Delete Capability
		None	None	Global Search & Replace
	Standard	None	None	Block Move/Copy
	None	None	None	Column Move/Delete
	Standard	None	None	Auto Repagination
	None	None	None	Auto Widow Adjust
	Standard	None	None	Auto File Sort
	Standard	None	None	Auto File Select
	None	None	None	Auto Footnote Tie-In
	None	None	None	Term Dictionary/Glossary
				COMMUNICATIONS
	Standard	None	None	Availability
	Batch or interactive; up to 9600 baud	—	—	Format & Speed
	None	None	None	ARITHMETIC CAPABILITY
	None	None	None	EDP CAPABILITY
	None	None	None	Multiprogramming
				Compilers
	None	None	None	Applications Software
	Paper tape punch, 3M tape drive, mag card reader, line printer	None	None	PERIPHERALS
	February 1976 USA	June 1971 USA	December 1973 USA	BACKGROUND INFORMATION
	—	1500 (3600 series tot.)	1500 (3600 series tot.)	First Delivery Date
	\$13,995	\$6,700	\$7,900	Country of Manufacture
	Not Available	\$150	\$265	Installed Base Estimate
	\$350	\$150 (5-yr.)	\$180 (5-yr.)	PRICING & TERMS
	\$85/mo.	\$37/mo.	\$43/mo.	Purchase
	—	90 days	90 days	Rental
				Lease
				Maintenance
				Warranty & Support
				REMARKS & OTHER FEATURES



## Standalone Word Processing Systems

COMPANY	Wydec	Wydec	Wydec	Wang
<b>MODEL</b>	1146	1200	1400	1222
<b>SYSTEM CONFIGURATION</b>				
Configuration	Keyboard/CRT, diskette console, printer	Keyboard/CRT, diskette console, printer	Keyboard/CRT, diskette console, printer	Typewriter, CRT, cassette console
<b>Memory Size</b>	—	—	—	—
<b>Storage Media</b>	Diskette	Diskette	Dual diskette	Dual cassette
<b>Storage Capacity</b>	225K chars./diskette	250K chars./diskette	250K chars./diskette	133K chars./cassette
<b>DISPLAY STATION FEATURES</b>				
Screen Size & Type	8" x 10.5" CRT	8" x 10.5" CRT	8" x 10.5" CRT	9.5" diagonal CRT*
Display Buffer Memory	4093 chars.	4093 chars.	4093 chars.	—
Format & Capacity	64 lines x 96 chars. (4093 chars. total)*	64 lines x 96 chars. (4093 chars. total)*	64 lines x 96 chars. (4093 chars. total)*	1 line x 100 chars. (100 chars. total)
Character Generation	Stroke writing	Stroke writing	Stroke writing	8 x 8 dot matrix
Cursor Positioning	Left, right, up, down, home, reverse home	Left, right, up, down, home, reverse home	Left, right, up, down, home, reverse home	Left, right
Vertical Scrolling	Standard	Standard	Standard	None
Horizontal Scrolling	None	None	None	None
Page Scrolling	Standard	Standard	Standard	None
Display Highlighting	Flash & intensify	Flash & intensify	Flash & intensify	Standard
Character Size Control	Optional	Optional	Optional	None
Character Pitch Display	None	None	None	None
Character Spacing Display	None	None	None	None
Line Spacing Display	Standard	Standard	Standard	None
Line Justify Display	None	None	None	None
Underscore Display	Standard	Standard	Standard	Code only
Sub/Superscript Display	Code only	Code only	Code only	None
Multi-Column Page Display	Manual	Manual	Manual	None
Stored Form Recall/Display	Standard	Standard	Standard	None
Control Code Display	Space & return	Space & return	Space & return	Standard
Format Statement Display	—	—	—	Standard
<b>PRINTER STATIONS FEATURES</b>				
Printer Type & Speed	Daisy wheel 45 cps	Daisy wheel 45 cps**	Daisy wheel 45 cps**	IBM Selectric 15.5 cps
Printer Buffer Memory	4093 chars.	4093 chars.	4093 chars.	None
Character Pitch/Spacing	10 & 12	10 & 12	10 & 12	10 & 12
Writing Line Width	13"	13"	13"	12.5"
Carriage Paper Width	14"	14"	14"	15.5"
First Line Forms Advance	None	Standard	Standard	Standard
End-Of-Page Stop	Standard	Standard	Standard	Standard
Justified Printout	None	Standard	Standard	Standard; interword sp.
Sub/Superscript Printout	None	None	None	Standard
Non-Adjust Printout	Standard	Standard	Standard	Standard
Bidirectional Printout	None	None	None	None
Simultaneous Printout	Standard	Standard	Standard	None
<b>GEN. FUNCTIONAL FEATURES</b>				
Media-Stored Format	Standard	Standard	Standard	Standard
Default Format Statement	Standard	Standard	Standard	Standard
Stored Multiple Formats	Standard	Standard	Standard	None
Machine Dialog/Menu Prompt	Communications only	Communications only	Communications only	None
<b>Forms Input</b>	Standard	Standard	Standard	None
Control Character Printout	None	None	None	None
Printout Queing	None	None	None	None
<b>Revision &amp; Status Reporting</b>	None	None	None	Doc. summary gives revision status
<b>System Security</b>	None	None	None	None
<b>TEXT INPUT FEATURES</b>				
Auto Carrier Return	None	None	None	Standard
Auto Word Wraparound	Optional w./wide screen	Optional w./wide screen	Optional w./wide screen	Standard
Auto Margin Adjust	Standard	Standard	Standard	Standard
Temporary Margins	2-step command	2-step command	2-step command	Standard
<b>Auto Decimal Tab</b>	None	None	None	Standard
<b>Hyphenation</b>	Manual; 8-char. Hot Zone	Manual; 8-char. Hot Zone	Manual; 8-char. Hot Zone	Manual; adjustable Hot Zone
<b>REMARKS &amp; OTHER FEATURES</b>	*Optional 25 lines x 60 chars. (4000 total)	*Optional 25 lines x 160 chars. (4000 total) **Optional wide document printer	*Optional 25 lines x 160 chars. (4000 total) **Optional wide document printer	*Video display optional, \$1,300

## Standalone Word Processing Systems

Wydec	Wydec	Wydec	Wang	COMPANY
	1200	1400	1222	<b>MODEL</b>
	Standard None	Standard None	None Standard	<b>TEXT INPUT FEATURES (cont'd)</b> Auto Input Underline Auto Centering
	Standard None None None	Standard None None None	None None None None	Auto Line Spacing Auto Page Numbering Auto Headers/Footers Auto Pagination <b>TEXT EDIT &amp; MERGE FEATURES</b> Document Assembly/Merge
Stored text assembled by para. & merged w/ keyboared text to form new document	Stored text assembled by para. & merged w/ keyboared text to form new document	Stored text assembled by para. & merged w/ keyboared text to form new document	Stored text assembled & merged w/keyboared text to form new docu- ment	<b>Search Capability</b>
By page no. & cursor position C, L	By page no. & cursor position C, L	By page no. & cursor position C, L	By char. string (max. 100 chars.) C, W, L, S	<b>Delete Capability</b>
None	None	None	None	<b>Global Search &amp; Replace</b>
Standard; 1 page max.	Standard; 1 page max.	Standard; 1 page max.	None	<b>Block Move/Copy</b>
Manual via multi-step stored program	Manual via multi-step stored program	Manual via multi-step stored program	None	<b>Column Move/Delete</b>
Manual	Manual	Manual	None	<b>Auto Repagination</b>
None	None	None	None	<b>Auto Widow Adjust</b>
None	None	None	None	<b>Auto File Sort</b>
None	None	None	Standard	<b>Auto File Select</b>
None	None	None	None	<b>Auto Footnote Tie-In</b>
None	None	None	None	<b>Term Dictionary/Glossary</b>
Optional Asynchronous ASCII at baud	Optional Bisynchronous ASCII, EBCDIC at 2000 to 9600 baud	Optional Bisynchronous ASCII, EBCDIC at 2000 to 9600 baud	Optional IBM 2741-compat. at 134 to 1200 baud	<b>COMMUNICATIONS</b> Availability Format & Speed
None	None	None	None	<b>ARITHMETIC CAPABILITY</b>
None	None	None	None	<b>EDP CAPABILITY</b>
None	None	None	None	Multiprogramming Compilers
None	None	None	None	<b>Applications Software</b>
Photocomposition inter- face, paper tape punch, wide doc. printer RS-232 devices	Photocomposition inter- face, paper tape punch, wide doc. printer RS-232 devices	Photocomposition inter- face, paper tape punch, wide doc. printer RS-232 devices	Paper tape punch	<b>PERIPHERALS</b>
June 1976 USA	June 1976 USA	June 1976 USA	September 1974 USA	<b>BACKGROUND INFORMATION</b> First Delivery Date Country of Manufacture Installed Base Estimate
—	1,200	500	500	<b>PRICING &amp; TERMS</b> Purchase
\$17,900	\$18,700	\$7,500		<b>Rental</b>
\$570	\$620	\$315		<b>Lease</b>
\$392 (5-yr.)	\$410 (5-yr.)	\$220 (5-yr.)		<b>Maintenance</b>
\$780	\$900	—		<b>Warranty &amp; Support</b>
90 days	90 days	90 days		
				<b>REMARKS &amp; OTHER FEATURES</b>

## Standalone Word Processing Systems

COMPANY	Wang	Wang	Wordplex	Xerox
<b>MODEL</b>	WP 10A	Editing Station	Wordplex 1	ETS 800/124
<b>SYSTEM CONFIGURATION</b> Configuration	Keyboard/CRT/diskette console, printer	Keyboard/CRT/diskette console	Keyboard/CRT/diskette console, printer	Typewriter, card console
<b>Memory Size</b>	8K	8K	Up to 64K	—
<b>Storage Media</b>	Dual diskette	Dual diskette	Dual diskette	Magnetic card
<b>Storage Capacity</b>	300K chars./diskette	300K chars./diskette	250K chars./diskette	10K chars./card
<b>DISPLAY STATION FEATURES</b>				
<b>Screen Size &amp; Type</b>	12" diagonal CRT	12" diagonal CRT	12" diagonal CRT	Not Available
<b>Display Buffer Memory</b>	—	—	10K chars.	Not Available
<b>Format &amp; Capacity</b>	24 lines x 80 chars. (1920 chars. total)	24 lines x 80 chars. (1920 chars. total)	24 lines x 80 chars. (1920 chars. total)	Not Available
<b>Character Generation</b>	8 x 8 dot matrix	8 x 8 dot matrix	7 x 9 dot matrix	Not Available
<b>Cursor Positioning</b>	Left, right, up, down	Left, right, up, down	Left, right, up, down, home	Not Available
<b>Vertical Scrolling</b>	Standard	Standard	Standard	Not Available
<b>Horizontal Scrolling</b>	Optional	Optional	Up to 128-char. line	Not Available
<b>Page Scrolling</b>	Standard	Standard	—	Not Available
<b>Display Highlighting</b>	Standard	Standard	None	Not Available
<b>Character Size Control</b>	None	None	None	Not Available
<b>Character Pitch Display</b>	None	None	None	Not Available
<b>Character Spacing Display</b>	None	None	None	Not Available
<b>Line Spacing Display</b>	None	None	Standard	Not Available
<b>Line Justify Display</b>	None	None	Standard	Not Available
<b>Underscore Display</b>	Standard	Standard	Standard	Not Available
<b>Sub-/Superscript Display</b>	Code only	Code only	Code only	Not Available
<b>Multi-Column Page Display</b>	Manual	Manual	Standard	Not Available
<b>Stored Form Recall/Display</b>	None	None	Standard	Not Available
<b>Control Code Display</b>	Standard	Standard	Standard	Not Available
<b>Format Statement Display</b>	Standard	Standard	Standard	Not Available
<b>PRINTER STATIONS FEATURES</b>				
<b>Printer Type &amp; Speed</b>	Daisy wheel 40 cps	Not Available	Daisy wheel 45 or 55 cps	Daisy wheel 30 cps
<b>Printer Buffer Memory</b>	—	Not Available	8K	256 chars.
<b>Character Pitch/Spacing</b>	10, 12	Not Available	10 & 12	10, 12, proportional
<b>Writing Line Width</b>	13.2"	Not Available	13"	13"
<b>Carriage Paper Width</b>	15"	Not Available	—	15"
<b>First Line Forms Advance</b>	Standard	Not Available	Standard	Standard
<b>End-Of-Page Stop</b>	Standard	Not Available	Standard	Standard
<b>Justified Printout</b>	Standard	Not Available	Standard	Standard
<b>Sub-/Superscript Printout</b>	Standard	Not Available	Standard	Standard
<b>Non-Adjust Printout</b>	Standard	Not Available	Standard	Standard
<b>Bidirectional Printout</b>	Standard	Not Available	Standard	Standard
<b>Simultaneous Printout</b>	Standard	Not Available	Standard	None
<b>GEN. FUNCTIONAL FEATURES</b>				
<b>Media-Stored Format</b>	Standard	Standard	—	Standard
<b>Default Format Statement</b>	Standard	Standard	—	Margins only
<b>Stored Multiple Formats</b>	None	None	—	None
<b>Machine Dialog/Menu Prompt</b>	Start-up, Summary, Play-out & Special menus	Start-up, Summary, Play-out & Special menus	Cue before deletion of document	None
<b>Forms Input</b>	None	None	—	None
<b>Control Character Printout</b>	None	None	Standard	None
<b>Printout Queuing</b>	Document index & list	None	Standard	None
<b>Revision &amp; Status Reporting</b>	Document summary gives revision status	Document summary gives revision status	—	None
<b>System Security</b>	None	None	Sign-on password	None
<b>TEXT INPUT FEATURES</b>				
<b>Auto Carrier Return</b>	Standard	Standard	Standard	Standard
<b>Auto Word Wraparound</b>	Standard	Standard	Standard	None
<b>Auto Margin Adjust</b>	Standard	Standard	Standard	Standard
<b>Temporary Margins</b>	Standard	Standard	Standard	None
<b>Auto Decimal Tab</b>	Standard	Standard	Standard	Standard
<b>Hyphenation</b>	Manual	Manual	Manual; adjustable Hot Zone	Manual; adjustable Hot Zone
<b>REMARKS &amp; OTHER FEATURES</b>			Draft printers, 300 or 600 lpm, available. Can also function as editing terminal in shared-logic configuration.	

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## Standalone Word Processing Systems

COMPANY	Xerox	Xerox	Xerox	XMark
<b>MODEL</b>	ETS 800/126	ETS 800/122 & 800C/152	ETS 800/128 & 800C/152	2000
<b>SYSTEM CONFIGURATION</b> Configuration	Typewriter, card console	Typewriter, tape console	Typewriter, tape console	Keyboard/CRT, CPU, printer
<b>Memory Size</b>	—	—	—	24K
<b>Storage Media</b>	Dual magnetic card	Cassette	Dual cassette	Dual diskette
<b>Storage Capacity</b>	10K chars./card	17K or 35K chars./cass.	17K or 35K chars./cass.	400K chars./diskette
<b>DISPLAY STATION FEATURES</b>				
Screen Size & Type	Not Available	Not Available	Not Available	14" diagonal CRT
Display Buffer Memory	Not Available	Not Available	Not Available	12K chars.
Format & Capacity	Not Available	Not Available	Not Available	24 lines x 80 chars. (1920 chars. total)
Character Generation	Not Available	Not Available	Not Available	11 x 13 dot matrix
Cursor Positioning	Not Available	Not Available	Not Available	Left, right, up, down, home, end of line
Vertical Scrolling	Not Available	Not Available	Not Available	10 lines per command
Horizontal Scrolling	Not Available	Not Available	Not Available	None
Display Highlighting	Not Available	Not Available	Not Available	None
Display Highlighting	Not Available	Not Available	Not Available	Flash, intensify, reverse
Character Size Control	Not Available	Not Available	Not Available	None
Character Pitch Display	Not Available	Not Available	Not Available	None
Character Spacing Display	Not Available	Not Available	Not Available	None
Line Spacing Display	Not Available	Not Available	Not Available	None
Line Justify Display	Not Available	Not Available	Not Available	None
Underscore Display	Not Available	Not Available	Not Available	Line & dotted line
Sub-/Superscript Display	Not Available	Not Available	Not Available	None
Mult-Column Page Display	Not Available	Not Available	Not Available	—
Stored Form Recall/Display	Not Available	Not Available	Not Available	—
Control Code Display	Not Available	Not Available	Not Available	Operator option
Format Statement Display	Not Available	Not Available	Not Available	—
<b>PRINTER STATIONS FEATURES</b>				
Printer Type & Speed	Daisy wheel 30 cps	Daisy wheel 30 cps	Daisy wheel 30 cps	Daisy wheel 55 cps
Printer Buffer Memory	256 chars.	256 chars.	256 chars.	—
Character Pitch/Spacing	10, 12, proportional	10, 12, proportional	10, 12, proportional	10, 12
Writing Line Width	13"	13"	13"	13"
Carriage Paper Width	15"	15"	15"	15"
First Line Forms Advance	Standard	Standard	Standard	Standard
End-Of-Page Stop	Standard	Standard	Standard	Standard
Justified Printout	Standard	Standard	Standard	Standard
Sub-/Superscript Printout	Standard	Standard	Standard	Standard
Non-Adjust Printout	Standard	Standard	Standard	Standard
Bidirectional Printout	Standard	Standard	Standard	Standard
Simultaneous Printout	None	None	None	Standard
<b>GEN. FUNCTIONAL FEATURES</b>				
Media-Stored Format	Standard	Standard	Standard	None
Default Format Statement	Margins only	Margins only	Margins only	Standard
Stored Multiple Formats	None	None	None	None
Machine Dialog/Menu Prompt	None	None	None	Extensive displays of operator options
Forms Input	None	None	None	Standard*
Control Character Printout	None	None	None	—
Printout Queuing	None	None	None	Standard
Revision & Status Reporting	None	None	None	—
System Security	None	None	None	—
<b>TEXT INPUT FEATURES</b>				
Auto Carrier Return	Standard	Standard	Standard	Standard
Auto Word Wraparound	None	None	None	Standard
Auto Margin Adjust	Standard	Standard	Standard	—
Temporary Margins	None	None	None	Standard
Auto Decimal Tab	Standard	Standard	Standard	None
Hyphenation	Manual; adjustable Hot Zone	Manual; adjustable Hot Zone	Manual; adjustable Hot Zone	—
<b>REMARKS &amp; OTHER FEATURES</b>				*Forms package for data entry applications. Additional memory & storage capacity avail.

## Standalone Word Processing Systems

	Xerox	Xerox	XMark	COMPANY
	ETS 800/122 & 800C/152	ETS 800/128 & 800C/151	2000	<b>MODEL</b>
	Standard	Standard	Standard	<b>TEXT INPUT FEATURES (cont'd)</b>
Between margins or tab settings	Between margins or settings	Between margins or tab settings	Standard	Auto Input Underline
None	None	None	None	Auto Centering
None	None	None	Standard	Auto Line Spacing
None	None	None	Standard	Auto Page Numbering
None	None	None	Standard	Auto Headers/Footers
				Auto Pagination
				<b>TEXT EDIT &amp; MERGE FEATURES</b>
Stored text merged w/ keyboarded text to form new document	Stored text merged w/ keyboarded text to form new document	Stored text assembled & merged w/keyboarded text to form new document	Stored text merged w/ keyboarded text to form new document	Document Assembly/ Merge
By reference no. & char. string C, L	By reference no. & char. string C, L	By reference no. & char. string C, L	By file name, page no. & cursor position C, W, L, S	<b>Search Capability</b>
				<b>Delete Capability</b>
Standard; non-global & manual replacement	Standard; non-global & manual replacement	Standard; non-global & manual replacement	Standard; non-global	<b>Global Search &amp; Replace</b>
None	None	Standard	Standard	<b>Block Move/Copy</b>
None	None	None	—	<b>Column Move/Delete</b>
None	None	None	Standard	<b>Auto Repagination</b>
None	None	None	Standard	<b>Auto Widow Adjust</b>
None	None	None	—	<b>Auto File Sort</b>
None	None	By reference or code no.	—	<b>Auto File Select</b>
None	None	None	None	<b>Auto Footnote Tie-In</b>
None	None	None	None	<b>Term Dictionary/Glossary</b>
				<b>COMMUNICATIONS</b>
Standard (800C)	Standard (800C)	Standard (800C)	Standard	Availability
ASCII, IBM CMC & 2741-compat. at 110 to 1200 baud	ASCII, IBM CMC & 2741-compat. at 110 to 1200 baud	ASCII, IBM CMC & 2741-compat. at 110 to 1200 baud	Asynchronous ASCII at 110 to 9600 baud	<b>Format &amp; Speed</b>
None	None	None	Full	<b>ARITHMETIC CAPABILITY</b>
None	None	None	None	<b>EDP CAPABILITY</b>
None	None	None	BASIC, Assembler	Multiprogramming
None	None	None	Available from XMark	Compilers
None	None	None	Paper tape punch, OCR	<b>Applications Software</b>
				<b>PERIPHERALS</b>
				<b>BACKGROUND INFORMATION</b>
October 1974*	October 1974*	October 1974*	March 1977	First Delivery Date
USA	USA	USA	USA	Country of Manufacture
—	—	—	—	Installed Base Estimate
\$11,100 (800)	\$11,780 (800)	\$11,780 (800)	\$15,500	<b>PRICING &amp; TERMS</b>
\$13,700 (800C)	\$14,380 (800C)	\$14,380 (800C)	—	Purchase
\$260	\$340	\$340	—	<b>Rental</b>
\$345	\$430	\$430	—	<b>Lease</b>
\$230 (2-yr.)	\$300 (2-yr.)	\$300 (2-yr.)	—	<b>Maintenance</b>
\$305 (2-yr.)	\$380 (2-yr.)	\$380 (2-yr.)	—	<b>Warranty &amp; Support</b>
\$515	\$675	\$675	—	
\$730	\$890	\$890	—	
90 days	90 days	90 days	—	
				<b>REMARKS &amp; OTHER FEATURES</b>
*Communicating model 800C/152 delivered March 1976	*Communicating model 800C/151 delivered March 1976			



# Shared-Logic Word Processing Systems

The following tabulations cover the parameters, features and pricing of 17 shared-logic word processing systems currently marketed by 14 different vendors. The table arrangement has been expanded into a two-page format to describe in more complete detail the overall characteristics of such systems.

The first or even-numbered pages cover System Configuration; Display Station Features; Printer Station Features; General Functional Features; and Text Input Features for each shared-logic system.

The second or odd-numbered pages continue the coverage of Text Input Features and also detail Text Edit & Merge Features; Communications; Arithmetic Capability; EDP Capability; Peripherals; Background Information; and Pricing & Terms.



## Shared-Logic Word Processing Systems

COMPANY	Avionic	Comptek	Daonics/Xerox	Digital Equipment (DEC)
<b>MODEL</b>	Wordstream III	Accutext/Barrister*	Visual Type 5400	WS102
<b>SYSTEM CONFIGURATION</b>				
System CPU/Controller	Avionic	Data Gen. Nova 3	HP 21MX	PDP-8/A
CPU/Controller Memory	16K or 32K	32K	32K or 48K*	—
System Storage Media	Diskette* (1-10)	Disc (1-4 or 8)	Disc (1-4)	Diskette (4)
Storage Capacity	77 pages/diskette**	2.4 to 192 Mb/disc	2.4 Mb/disc	256K (text); 125K (sys)
File Organization	By page	By document and line number	By document (max. 135 pages/document)	By document
No Keystations Supported	12***	16**	10	2*
No Printers Supported	6****	2**	10	1
<b>DISPLAY STATION FEATURES</b>				
Screen Size & Type	10" x 12" CRT	8" x 10" CRT	Gas Plasma**	12" CRT
Display Buffer Memory	4560 char.	1920 char.	—	2000 char.
Format & Capacity	57 lines x 80 char. (4560 char. total)	24 lines x 80 char. (1920 char. total)	44 lines by 85 char.** (3740 char. total)	24 lines x 80 char. (1920 char. total)
Character Generation	10 x 12 dot matrix	7 x 7 dot matrix	7 x 9 dot matrix	5 x 7 dot matrix
Cursor Positioning	Left, Right, Up, Down, Home	None	Left, Right, Up, Down, Home	Left, Right along fixed line
Vertical Scrolling	None	Standard	Standard	Standard
Horizontal Scrolling	None*****	None	None	None
Page Scrolling	Standard	None	Standard	Standard
Display Highlighting	Standard	Standard (op. control)	None	None
Character Size Control	None	None	None	None
Character Pitch Display	None	None	None	None
Character Spacing Display	None	None	None	None
Line Spacing Display	Standard	None	Standard	Standard
Line Justify Display	Standard	None	Standard w. display key	None
Underscore Display	Standard	Standard	Standard	Codes only
Sub/Superscript Display	Codes Only	Codes Only	Standard w. display key	None
Multi-Column Page Display	None	Standard	Standard	Manual
Stored Form Recall/Display	Standard	Standard	Standard	Standard
Control Code Display	Standard	None	Standard w. display key	Standard
Format Statement Display	None	Standard	—	Standard
<b>PRINTER STATIONS FEATURES</b>				
Printer Type & Speed	Qume daisy wheel 45 cps	Diablo daisy whl 45 cps	Daisy wheel 30/40 cps	Daisy wheel 45 cps
Printer Buffer Memory	4560 char.	768 char.	—	—
Character Pitch/Spacing	10/12	10/12	10, 12, prop. (40 cps)	10 or 12
Writing Line Width	13"	13"	13"	13.2"
Carriage Paper Width	15"	15"	15"	15"
First Line Forms Advance	Standard	Standard	Standard	Standard
End-Of-Page Stop	Standard	Standard	Standard	Standard
Justified Printout	Standard; interword sp.	Standard; interword sp.	Standard	Standard
Sub/Superscript Printout	Standard	Standard (Diablo only)	Standard	Standard
Non-Adjust Printout	Standard	Standard	Standard (graphics mode)	Standard
Bidirectional Printout	None	Standard	Standard	Standard
Simultaneous Printout	Standard	High speed printer only	Standard	Standard
<b>GEN. FUNCTIONAL FEATURES</b>				
Media-Stored Format	Standard	Standard	Standard	Standard
Default Format Statement	None	Standard	Standard	Standard
Stored Multiple Formats	Standard	Standard	Standard	Standard
Machine Dialog/Menu Prompt	None	Limited prompting	—	Displays all operator special menu for DP
Forms Input	Standard	Standard	Standard	Standard
Control Character Printout	Standard	Standard	Standard	Limited
Printout Queuing	Standard	Standard	Standard	Standard
Revision & Status Reporting	Operator Option via Index entries	Revision status via Index entries	Via Index and Print Directory	Via Index
System Security	Diskette drives assigned to specific operator	Three-level password	Ten-level password	None
<b>TEXT INPUT FEATURES</b>				
Auto Carrier Return	Optional (no charge)	None	Standard	Standard
Auto Word Wraparound	Optional (no charge)	CRT only	Standard	Standard
Auto Margin Adjust	Standard	Standard	Standard	Standard
Temporary Margins	Standard	Standard	Optional	Standard
Auto Decimal Tab	Standard (by column)	3rd quarter 1977	Standard	Standard
Hyphenation	Manual; 5-char. Hot Zone Zone	Algorithm plus 1,000-word dictionary	Adjustable Hot Zone; 25,000-word dictionary optional	Manual; ghost hyphens
<b>REMARKS &amp; OTHER FEATURES</b>				
	*Disc to be announced. ** 154 pages w. floppy. ***7+ require add'l memory. ****4 daisy wheel printers; 2 line printers. *****Up to 4 pages combined at print-out. Printers controlled by operator at print stat.	*Barrister includes legal time accounting. **Hardcopy terminals can be dedicated printer.	*Expandable to 128K. **1-line (32 char.) display avail.	*Up to 4 media-less terminals may be hardwired only 2 terminals may be used at one time.

## Shared-Logic Word Processing Systems

Avionic	Comptek	Daconics/Xerox	Digital Equipment (DEC)	COMPANY
Model III	Accutext/Barrister*	Visual Type 5400	WS102	MODEL
Centers between margins	Standard Centers between margins	Manual Standard	Standard Centers between margins or about a point Standard	TEXT INPUT FEATURES (cont'd) Auto Input Underline Auto Centering
25K	Standard Standard Standard Standard	Standard Standard Standard Standard	Standard Standard Standard Standard	Auto Line Spacing Auto Page Numbering Auto Headers/Footers Auto Pagination
Recorded text segments and combined to new document	Paragraphs (called doc- uments) are merged and stored as new document	Recorded para. merged by name or no. and w. new text	Recorded text merged with lists, boilerplate, new text	TEXT EDIT & MERGE FEATURES Document Assembly/Merge
char. tall rix ing file	By document no. and line no. C, W, L, Para., Document	By document and page no. C, W, L, S	By document and page no., char. string C, W, L, S, document	Search Capability Delete Capability
Next, specified no. or all occurrences; auto. replacement or deletion; w/i column**	Standard	All occurrences, auto. replacement; replace- ments marked	Next or all occurrences; manual replacement or deletion	Global Search & Replace
Standard text merges automatically	Standard	Standard	Standard	Block Move/Copy
Standard	Standard	Standard	Manual	Column Move/Delete
Standard	Standard	Standard	Standard	Auto Repagination
Standard	Standard	To be announced	Manual	Auto Widow Adjust
Standard; 1st 10 char.; 256 char., 5 levels Standard	Standard	None	Optional	Auto File Sort
Standard (up to 80 char.)	Standard	None	One-level standard; six-level optional	Auto File Select
Standard w. auto. no. None***	Standard	Standard None	Manual Standard	Auto Footnote Tie-In Term Dictionary/Glossary
Standard 3077 Standard 2400 baud	Optional Asynchronous ASCII, 300 to 9600 baud	Optional HASP REG 2780-type, 4800 baud; Xerox 800ETS/C, 300 baud Optional*	Optional Asynchronous ASCII, 300 to 9600 baud	COMMUNICATIONS Availability Format & Speed
Standard totaling	Barrister only	None	None	ARITHMETIC CAPABILITY EDP CAPABILITY Multiprogramming Compilers
Standard Fortran, ALGOL, BASIC	Standard Fortran, ALGOL, BASIC	W. DOS-II Processor W. DOS-III Processor Fortran, ALGOL, BASIC	None None None	Applications Software
Legal time accounting; user programs 430 lpm line printer	Legal time accounting; user programs 430 lpm line printer	User-generated w. DOS-III Processor 400 lpm line printer; OCR; photocomposer; mag tape	Up to 4 "dumb" ter- minals; only 1 can be used at a time.	PERIPHERALS
1971 U.S. 38 systems	1971 U.S. 38 systems	July 1974 U.S. —	Oct. 1976 U.S. —	BACKGROUND INFORMATION First Delivery Date Country of Manufacture Installed Base Estimate
\$42,000-\$140,000****	\$42,000-\$140,000****	\$45,000 to \$200,000	\$28,990	PRICING & TERMS Purchase
\$1,400-\$5,300	\$1,400-\$5,300	\$1,665 (12 mo.)*	—	Rental
Third Party	Third Party	\$1,385 (5-yr.)*	—	Lease
Manufacturer	Manufacturer	Manufacturer	Manufacturer	Maintenance
30 days	30 days	5 days N/C operator training	90 days parts & labor 3 days N/C operator training	Warranty & Support
*Barrister includes legal time accounting. **Info. can be extracted to another file. ***Avail. via. global replace. routine. ****Barrister: \$52,000 -\$200,000.	*Barrister includes legal time accounting. **Info. can be extracted to another file. ***Avail. via. global replace. routine. ****Barrister: \$52,000 -\$200,000.	*Calculation software. **For CPU, 2 disks, 2 44-line terminals, Diablo 30 cps printer; maintenance included.	Conversion from 310W or WS100 to WS102 @ \$9,190. "Dumb" terminal @ \$2,095.	REMARKS & OTHER FEATURES

## Shared-Logic Word Processing Systems

COMPANY	Digital Equipment (DEC)	Edit Systems	GC/S	ICS
<b>MODEL</b>	WP-11	Text Ed II	SL-500/SL-600	Astrocomp-D/1 Wordsystem 112*
<b>SYSTEM CONFIGURATION</b>				
System CPU/Controller	PDP-11/34, 11/60, 11/70	PDP-8/E	CAI Alpha 16	ICS minicomputer
CPU/Controller Memory	64K (expandable)	—	64K/88K	—
System Storage Media	Disc + diskette	3M Data cartridge*	(Disk 1-4)	Disc (1-4)
Storage Capacity	2.5Mb + 250,000 char.	768K char.	10Mb/20Mb/disc	2.5Mb-40Mb/disc
File Organization	By document name and character string	By document no. and line no. or character string	—	By document name/no. and line no.
No Keystations Supported	16 (expandable)	10	16/32	12
No Printers Supported	17	10	3	4
<b>DISPLAY STATION FEATURES</b>				
Screen Size & Type	12" CRT	1" x 12" LED	6.5" x 7" CRT	15" CRT**
Display Buffer Memory	16K	—	—	1920 char.
Format & Capacity	24 lines x 80 char. (1980 char. total)	1 line x 32 char. (32 char. total)	16 lines x 32 char. (512 char. total)	24 lines x 80 char. (1920 char. total)
Character Generation	5 x 7 dot matrix	LED	5 x 7 dot matrix	7 x 9 dot matrix
Cursor Positioning	Left, Right, Along fixed line	Left, Right	Left, Right, Up, Down	Left, Right, Up, Down
Vertical Scrolling	Standard	None	Standard	Standard
Horizontal Scrolling	None	None	None	Standard (to 95 char.)
Page Scrolling	Standard	None	None	None
Display Highlighting	None	None	None	Photocomposition only
Character Size Control	None	None	None	None
Character Pitch Display	None	None	None	None
Character Spacing Display	None	None	None	None
Line Spacing Display	Standard	None	None	Standard
Line Justify Display	None	None	None	Standard
Underscore Display	Codes Only	None	None	Codes Only
Sub/Superscript Display	None	None	None	Codes Only
Multi-Column Page Display	Manual	None	None	None
Stored Form Recall/Display	Standard	None	None	None
Control Code Display	Standard	None	Standard	Standard
Format Statement Display	Standard	None	None	Standard
<b>PRINTER STATIONS FEATURES</b>				
Printer Type & Speed	Daisy Wheel 45 cps	Qume daisy wheel 45 cps	Qume daisy wheel 45 cps	Daisy wheel 45 cps
Printer Buffer Memory	—	—	—	—
Character Pitch/Spacing	10 or 12	10 or 12	10/12/prop.	10/12
Writing Line Width	13.2"	13.2"	13.2"	13"
Carriage Paper Width	15"	15"	15"	15"
First Line Forms Advance	Standard	Standard	Standard	Standard
End-Of-Page Stop	Standard	Standard	Standard	Standard
Justified Printout	Standard	Standard; interch. sp.	Standard	Standard
Sub/Superscript Printout	Standard	Standard	Standard	Standard
Non-Adjust Printout	Standard	Standard	None	Standard
Bidirectional Printout	Standard	Standard	Standard	None
Simultaneous Printout	Standard	Standard	Standard	Standard***
<b>GEN. FUNCTIONAL FEATURES</b>				
Media-Stored Format	Standard	Standard	None	Standard
Default Format Statement	Standard	Standard	Standard	None
Stored Multiple Formats	None	Standard	Standard	Standard
Machine Dialog/Menu Prompt	Standard	None	Standard	None
Forms Input	None	None	None	None
Control Character Printout	None	Standard w. line nos.	Standard	Standard
Printout Queuing	By document name, w. deletion*	Optional	Up to 16 documents	Up to 20 documents/printer
Revision & Status Reporting	Via Index	None	None	Via Index
System Security	Log-on Password; 3 levels	None	Passwords; keylock on CPU	None
<b>TEXT INPUT FEATURES</b>				
Auto Carrier Return	Standard	Standard	Standard	None
Auto Word Wraparound	Standard	Standard	Standard	None
Auto Margin Adjust	Standard	Standard	Standard	Standard
Temporary Margins	Standard	Standard	Standard	None
Auto Decimal Tab	Standard	Standard	Standard	Standard
Hyphenation	Manual; ghost hyphens	Optional algorithm	Ghost hyphens	25,000-word dictionary
<b>REMARKS &amp; OTHER FEATURES</b>	*Print queue can send single document from single station to multiple printers.	*One per station		*Astrocomp-D/1 includes photocomposition output capabilities. **16" Gas Plasma display avail. Hard copy (Selectric or Qume) I/O also avail. ***Can print same document simultaneously on more than one printer.

## Shared-Logic Word Processing Systems

Equipment (DEC)	Edit Systems	GC/S	ICS	COMPANY
Text Ed II	Text Ed II	SL-500/SL-600	Astrocomp-D/1 Wordsystem 112*	MODEL
Standard	Standard	Standard	Standard	TEXT INPUT FEATURES (cont'd)
Centers between margins	Standard	Standard	Centers between margins	Auto Input Underline
Standard	Standard	Standard	Standard	Auto Centering
Standard	Standard	Standard	Standard**	Auto Line Spacing
Standard	Standard	Headers only	Standard	Auto Page Numbering
Standard	Standard	Standard	Standard	Auto Headers/Footers
Paragraph assembly; recorded text merged recorded variables	Recorded text merged w. recorded or key- boarded variables	Recorded text merged w. keyboarded variables	Paragraph assembly	Auto Pagation
Document name and character string C, W, L, S, Document	By document no. and line no. —	By document no. and character string C, W, L	By document name/no. and character string C, W, L, Set of lines	TEXT EDIT & MERGE FEATURES Document Assembly/Merge
First occurrence of occurrences; manual replacement	First occurrence or all occurrences; manual or automatic deletion or replacement Standard	First occurrence; manual replacement	First occurrence or all occurrences; delete or replacement	Search Capability
Standard	Standard	None	Standard	Delete Capability
Standard program- memory	Standard	None	None	Global Search & Replace
Standard	Standard	Standard	Standard	Block Move/Copy
Standard	Standard	Standard	Standard	Column Move/Delete
Standard	Standard	Standard	Standard	Auto Repagination
Standard	Standard	Standard	None	Auto Widow Adjust
Optional	Optional	None	Optional	Auto File Sort
None	None	None	Optional	Auto File Select
Standard	Standard	None	Standard	Auto Footnote Tie-In
None	None	None	None	Term Dictionary/Glossary
Optional	Optional	Optional	Optional	COMMUNICATIONS
Asynchronous; half- speed ASCII	ASCII; 75 to 1200 baud	Bisynchronous; batch	—	Availability
None	None	None	With Fortran option	Format & Speed
None	None	None	Standard	ARITHMETIC CAPABILITY
None	None	None	Fortran; others on custom basis	EDP CAPABILITY
None	None	None	Photocomposition	Multiprogramming
None	None	None	None	Compilers
None	None	None	None	Applications Software
OCR; paper tape; photocomposer	OCR; paper tape; photocomposer	210 lpm line printer; Mag Tape	55 cps daisy printer; 1200/2400 lpm matrix printer; 500 lpm line printer; OCR;***	PERIPHERALS
1972	1972	April 1977/June 1976	July 1976	BACKGROUND INFORMATION
U.S.	U.S.	U.S.	U.S.	First delivery Date
—	—	—/12	—	Country of Manufacture
\$30,890*	\$41,400/\$73,600*	\$52,000/\$37,500****	\$2,324/\$1,484****	Installed Base Estimate
\$768/mo.*	—	—	—	PRICING & TERMS
\$591/mo. (3-yr.)*	\$900/\$1,600 (3-yr.)	—	—	Purchase
\$1,500/yr.	\$300/\$440/mo.	Manufacturer or Sorbus	90 days	Rental
2 days N/C operator training	—	—	—	Lease
*CPU and one command station.	*Without terminals or printer. Video terminal \$3,450; 45 cps printer \$8,050; line printer \$24,150.	*Astrocomp-D/1 includes photocomposition output capabilities. **Paragraph- ing numbering to 6 levels. ***Mag Tape, Cassette, Card Convertors; 650 wpm electrostatic printer. ****Basic configuration: 2.5Mb disc, 1 CRT display, 45 cps daisy wheel printer.	—	Maintenance
—	—	—	—	Warranty & Support
—	—	—	—	REMARKS & OTHER FEATURES



## Shared-Logic Word Processing Systems

COMPANY	Jacquard	LCS	LCS	Omnitext
<b>MODEL</b>	Video Word Processor	Computext 1 Cluster	Computext Shared Logic System	1500
<b>SYSTEM CONFIGURATION</b>				
System CPU/Controller	Jacquard J-100	PDP-8/A	PDP-8/E	Nova 1200
CPU/Controller Memory	32K (expandable)	32K	32K	4K to 32K
System Storage Media	Disc + diskette	Disc (1-4)*	Disc (1-4)	Disc + Diskette
Storage Capacity	160Mb/Disc; 750 ch/diskt	2.4Mb/Disc	2.4Mb/Disc	10Mb/Disc; 250K ch/diskt
File Organization	—	By file, by document, and by paragraph**	By file, by document, and by paragraph*	—
No Keystations Supported	10	8 keystations/printers	12 keystations/printers	4
No Printers Supported	10	8 keystations/printers	12 keystations/printers	4
<b>DISPLAY STATION FEATURES</b>				
Screen Size & Type	12" diagonal CRT	12" CRT	12" CRT	14" CRT
Display Buffer Memory	1920 chars.	1920 char.	1920 char.	10,240 char.
Format & Capacity	24 lines x 80 chars. (1920 chars. total)	24 lines x 80 char. (1920 char. total)	24 lines x 80 char. (1920 char. total)	32 lines x 80 char. (2560 char. total)
Character Generation	5 x 8 dot matrix	5 x 7 dot matrix	5 x 7 dot matrix	7 x 11 dot matrix
Cursor Positioning	—	Left, Right, Up, Down	Left, Right, Up, Down	Left, Right, Up, Down, Home
Vertical Scrolling	Standard	None	None	Standard
Horizontal Scrolling	None	None	None	None
Page Scrolling	None	Standard	Standard	None
Display Highlighting	Intensify	None	None	Standard
Character Size Control	None	None	None	None
Character Pitch Display	None	None	None	None
Character Spacing Display	None	None	None	None
Line Spacing Display	None	None	None	None
Line Justify Display	None	None	None	None
Underscore Display	Code only	Codes Only	Codes Only	Standard
Sub/Superscript Display	Code only	Codes Only	Codes Only	Standard
Multi-Column Page Display	None	Manual	Manual	None
Stored Form Recall/Display	None	Limited	Limited	Standard
Control Code Display	Standard	Standard	Standard	Standard
Format Statement Display	None	Standard	Standard	Standard
<b>PRINTER STATIONS FEATURES</b>				
Printer Type & Speed	Diablo daisy 30/45/55	Daisy wheel 30 cps	Daisy wheel 30 cps	Qume daisy 30/45/45
Printer Buffer Memory	—	None	None	—
Character Pitch/Spacing	10, 12	10/12	10/12	10/12/prop.
Writing Line Width	13"	13"	13"	13.2"
Carriage Paper Width	15"	15"	15"	15"
First Line Forms Advance	—	Standard	Standard	Standard
End-Of-Page Stop	Standard	Standard	Standard	Standard
Justified Printout	Standard	Standard	Standard	Standard
Sub/Superscript Printout	Standard	Standard	Standard	Standard
Non-Adjust Printout	Standard	Standard	Standard	Standard
Bidirectional Printout	Standard	None	None	Standard
Simultaneous Printout	Standard	Standard	Standard	Standard
<b>GEN. FUNCTIONAL FEATURES</b>				
Media-Stored Format	Standard	Standard	Standard	Standard
Default Format Statement	None	None	None	None
Stored Multiple Formats	None	Standard	Standard	Standard
Machine Dialog/Menu Prompt	None	None	None	Standard
Forms Input	Standard	Standard	Standard	—
Control Character Printout	Standard	Standard	Standard	Standard
Printout Queuing	Standard	Standard	Standard	Standard
Revision & Status Reporting	—	Via Document Index Option	Via Document Index Option	Standard
System Security	—	None	None	Job ID nos.; multi-level passwords
<b>TEXT INPUT FEATURES</b>				
Auto Carrier Return	None	Standard	Standard	—
Auto Word Wraparound	None	Standard	Standard	Standard
Auto Margin Adjust	Standard	Standard	Standard	Standard
Temporary Margins	Standard	Standard	Standard	Standard
Auto Decimal Tab	None	Standard	Standard	Standard
Hyphenation	Algorithm or manual; adjustable Hot Zone	Manual; optional hyphenation package	Manual; optional hyphenation package	Manual; adjustable (2-14 char.) Hot Zone
<b>REMARKS &amp; OTHER FEATURES</b>		*Diskette available for off-line storage. **100 documents/file; 240 paragraphs/document; 768 char./para.	*100 documents/file; 240 paragraphs/document; 768 char./para.	

# Shared-Logic Word Processing Systems

Jacquard	LCS	LCS	Omnitext	COMPANY
Model Processor	Computext 1 Cluster	Computext Shared Logic System	1500	MODEL
Standard	Standard	Standard	Standard	TEXT INPUT FEATURES (cont'd)
Standard	Standard	Standard	Standard	Auto Input Underline
Standard	Standard	Standard	Standard	Auto Centering
Standard	Standard	Standard	Standard	Auto Line Spacing
Standard	Standard	Standard	Standard	Auto Page Numbering
Standard	Standard	Standard	Standard	Auto Headers/Footers
Standard	Standard	Standard	Standard	Auto Pagination
Recorded text merged w. recorded or keyboarded variables	Recorded text merged w. recorded or keyboarded variables	Recorded text merged w. recorded or keyboarded variables	Recorded text merged w. recorded or keyboarded variables	TEXT EDIT & MERGE FEATURES
Document no. & cursor	By document and page, para., or line no. By string search	By document and page, para., or line no. By string search	By document and page no. C, W, L	Document Assembly/Merge
Next occurrence or all occurrences; manual replacement or deletion	Next occurrence or all occurrences; manual or automatic replacement	Next occurrence or all occurrences; manual or automatic replacement	Next occurrence or all occurrences; manual or automatic replacement	Search Capability
Standard	Standard	Standard	Standard	Delete Capability
None	None	None	Manual	Global Search & Replace
Standard	Standard	Standard	Standard	Block Move/Copy
Standard	Standard	Standard	Standard	Column Move/Delete
Standard	Standard	Standard	Standard	Auto Repagination
Standard	Standard	Standard	Standard	Auto Widow Adjust
Ascending order alpha. or numeric	Ascending order alpha. or numeric	Ascending order alpha. or numeric	Standard	Auto File Sort
Standard	Standard	Standard	Standard	Auto File Select
None	None	None	Standard	Auto Footnote Tie-In
Optional	Optional	Optional	Optional	Term Dictionary/Glossary
CMC or Internal; 600, 1200, 2400, 4800 baud	CMC or Internal; 600, 1200, 2400, 4800 baud	CMC or Internal; 600, 1200, 2400, 4800 baud	ASCII or EBCDIC; half duplex	COMMUNICATIONS
None	None	None	None	Availability
None	None	None	None	Format & Speed
None	None	None	None	ARITHMETIC CAPABILITY
None	None	None	None	EDP CAPABILITY
None	None	None	None	Multiprogramming
None	None	None	None	Compilers
180/220/440 lpm line printers; OCR; Mag Card Reader	180/220/440 lpm line printers; OCR; Mag Card Reader	180/220/440 lpm line printers; OCR; Mag Card Reader	Line printers; OCR; photocomposition interface; MT/ST Tape*	Applications Software
March 1976 U.S.	April 1972 U.S.	February 1972 U.S.	100	PERIPHERALS
\$23,500	\$62,000	\$24,900**	—	BACKGROUND INFORMATION
\$494 (3-mo.)	\$1,302 (3-mo.)	—	—	First Delivery Date
\$494	\$1,302	—	—	Country of Manufacture
Digital Equipment	Digital Equipment	—	—	Installed Base Estimate
None	None	—	—	PRICING & TERMS
Phototypesetting: Universal Interface to Paper Tape	Phototypesetting: Universal Interface to Paper Tape	*Paper Tape Reader; any RS-232 devices.	—	Purchase
—	—	**Basic configuration: display, dual diskette drive, Qume printer.	—	Rental
—	—	—	—	Lease
—	—	—	—	Maintenance
—	—	—	—	Warranty & Support
Minimum configuration: CPU, dual diskette, CRT/key board & printer	Phototypesetting: Universal Interface to Paper Tape	Phototypesetting: Universal Interface to Paper Tape	—	REMARKS & OTHER FEATURES

## Shared-Logic Word Processing Systems

COMPANY	Qualterm	Wang	Wang	Wordplex
<b>MODEL</b>	Compu-File*	Word Processor 20	Word Processor 30	Wordplex/7
<b>SYSTEM CONFIGURATION</b>				
System CPU/Controller	Compu-file	Term. Microprocessors	Term. Microprocessors	Wordplex/7 CPU
CPU/Controller Memory	16K	16K/station	16K/station	Up to 64K
System Storage Media	Diskette	Diskette (2)	Disc + Diskette	10Mb/Disc; 256K ch/dkt.
Storage Capacity	311K chars./diskette	256K char./diskette	10Mb/Disc; 256K ch/dskt	40Mb-300Mb/Disc
File Organization	2,341 records of 128 char. each	By document and page no.	By document and page no.	By document (max. 255 pages/docu. and page no
No Keystations Supported	8	3	14 keystations/printers	32
No Printers Supported	1	3	14 keystations/printers	32
<b>DISPLAY STATION FEATURES</b>				
Screen Size & Type	12" diagonal CRT	12" CRT	12" CRT	12" CRT
Display Buffer Memory	—	—	—	10,000 char.
Format & Capacity	24 lines x 80 chars. (1920 chars. total)	24 lines x 80 char. (1920 char. total)	24 lines x 80 char. (1920 char. total)	24 lines x 80 char. (1920 char. total)
Character Generation	7 x 9 dot matrix	8 x 8 dot matrix	8 x 8 dot matrix	7 x 9 dot matrix
Cursor Positioning	Left, Right, Up, Down	Left, Right, Up, Down	Left, Right, Up, Down	Left, Right, Up, Down, Home
Vertical Scrolling	Standard	Standard	Standard	Standard
Horizontal Scrolling	None	Optional	Optional	Standard (to 128 char.)
Page Scrolling	None	Standard	Standard	—
Display Highlighting	Intensify, reverse	Standard	Standard	None
Character Size Control	None	None	None	None
Character Pitch Display	None	None	None	None
Character Spacing Display	None	None	None	None
Line Spacing Display	None	None	None	Standard
Line Justify Display	None	None	None	Standard (sep. command)
Underscore Display	Code only	Standard	Standard	Standard
Sub/Superscript Display	Code only	Codes Only	Codes Only	Codes Only
Multi-Column Page Display	None	Manual	Manual	Standard
Stored Form Recall/Display	None	None	None	Standard
Control Code Display	Operator option	Standard	Standard	Standard
Format Statement Display	None	Standard	Standard	Standard
<b>PRINTER STATIONS FEATURES</b>				
Printer Type & Speed	Qume daisy 55 cps 128 chars.	Daisy wheel, 40 cps	Daisy wheel, 40 cps	Daisy wheel, 45/55 cps 8K
Printer Buffer Memory	10, 12	10 or 12	10 or 12	10 or 12
Character Pitch/Spacing	13"	13.2"	13.2"	13.2"
Writing Line Width	15"	15"	15"	15"
Carriage Paper Width	Standard	Standard	Standard	Standard
First Line Forms Advance	Standard	Standard	Standard	Standard
End-Of-Page Stop	Standard	Standard	Standard	Standard
Justified Printout	Standard	Standard; interword sp.	Standard; interword sp.	Standard
Sub/Superscript Printout	Standard	Standard	Standard	Standard
Non-Adjust Printout	Standard	Standard	Standard	Standard
Bidirectional Printout	Standard	Standard	Standard	Standard
Simultaneous Printout	None	Standard	Standard	Standard
<b>GEN. FUNCTIONAL FEATURES</b>				
Media-Stored Format	Standard	Standard	Standard	—
Default Format Statement	None	Standard	Standard	—
Stored Multiple Formats	None	None	None	—
Machine Dialog/Menu Prompt	None	Standard	Standard	Limited
Forms Input	Standard	None	None	—
Control Character Printout	Standard	None	None	—
Printout Queuing	Prints from diskette or display	Standard; to limit of of working storage	Standard	Standard
Revision & Status Reporting	None	Via Index	Via Index	—
System Security	None	None	None	Password Sign-on
<b>TEXT INPUT FEATURES</b>				
Auto Carrier Return	None	Standard	Standard	Standard
Auto Word Wraparound	None	Standard	Standard	Standard
Auto Margin Adjust	Standard	Standard	Standard	—
Temporary Margins	Standard	Standard	Standard	Standard
Auto Decimal Tab	None	Standard	Standard	Standard
Hyphenation	Manual; adjustable Hot Zone	Manual; scan before printout	Manual; scan before printout	Manual; adjustable Hot Zone
<b>REMARKS &amp; OTHER FEATURES</b>	*Modular design of system permits many configurations			

# Shared-Logic Word Processing Systems

Qualitem	Wang	Wang	Wordplex	COMPANY
Model	Word Processor 20	Word Processor 30	Wordplex/7	<b>MODEL</b>
None	None	None	Standard	<b>TEXT INPUT FEATURES (cont'd)</b>
Standard	Centers between margins	Centers between margins	Standard	Auto Input Underline
None	Standard	—	Standard	Auto Centering
Standard	Standard	—	None	Auto Line Spacing
Standard	None	—	Standard	Auto Page Numbering
Standard	Standard	—	Standard	Auto Headers/Footers
				Auto Pagination
				<b>TEXT EDIT &amp; MERGE FEATURES</b>
Text from files merged	Copy recorded paragraphs to new location to form new document	Copy recorded paragraphs to new location to form new document	—	Document Assembly/Merge
Unrecorded text to form new document				
By filename, line no.	By document name and character string C, W, S, P	By document name and character string C, W, S, P	By document name and page no. C, W, L	<b>Search Capability</b>
Standard	Next occurrence or all occurrences; manual replacement	Next occurrence or all occurrences; manual replacement	Within a page; manual replacement	<b>Delete Capability</b>
None	Standard	Standard	Standard	<b>Global Search &amp; Replace</b>
None	Via keyboard program	Via keyboard program	None	<b>Block Move/Copy</b>
Standard	Scan before printout; manual	Scan before printout; manual	Standard	<b>Column Move/Delete</b>
Standard	Manual	Manual	None	<b>Auto Repagination</b>
None	None	None	None	<b>Auto Widow Adjust</b>
Standard	None	None	Standard	<b>Auto File Sort</b>
None	None	None	None	<b>Auto File Select</b>
None	72 entries/document (40 char. each)	72 entries/document (40 char. each)	None	<b>Auto Footnote Tie-In</b>
Standard	Optional 2741/2780/teletype; 134.5 to 4800 bauds	Optional 2741/2780/teletype; 134.5 to 4800 bauds	Optional ASCII; synchronous or bisynchronous; 150 to 9600 bauds	<b>Term Dictionary/Glossary</b>
Full duplex	None	None	None	<b>COMMUNICATIONS</b>
EBDIC at 110 baud	None	None	None	Availability
None	None	None	None	Format & Speed
None	None	None	None	<b>ARITHMETIC CAPABILITY</b>
None	None	None	None	<b>EDP CAPABILITY</b>
None	None	None	None	Multiprogramming
None	None	None	None	Compilers
None	None	None	None	<b>Applications Software</b>
Devices	120/200 cps line printer; paper tape for photocomposition	120/200 cps line printer; paper tape for photocomposition	Wordplex/1; line printer	<b>PERIPHERALS</b>
September 1976 U.S.	September 1976 U.S.	September 1976 U.S.	May 1976 U.S.	<b>BACKGROUND INFORMATION</b>
\$18,000*	\$30,000*	\$49,500		First Delivery Date
\$675	\$1,125	—		Country of Manufacture
\$441 (5-yr.)	\$735 (5-yr.)	—		Installed Base Estimate
\$85/mo., leased or purchased systems	\$220/mo., leased or purchased systems	—		<b>PRICING &amp; TERMS</b>
—	—	—		Purchase
				<b>Rental</b>
				<b>Lease</b>
				<b>Maintenance</b>
				<b>Warranty &amp; Support</b>
Includes 3 display units, 4 diskette drives, printer & 16K memory	*Work Station; Dual Diskette; Daisy Printer	*2 Work Stations; Disc + Diskette; Daisy printer		<b>REMARKS &amp; OTHER FEATURES</b>



## Shared-Logic Word Processing Systems

COMPANY	World Info Systems			
<b>MODEL</b>	TDS-36			
<b>SYSTEM CONFIGURATION</b>				
System CPU/Controller	Interdata 716			
CPU/Controller Memory	16K (expandable)			
System Storage Media	Disc			
Storage Capacity	10Mb/Disc			
File Organization	---			
No Keystations Supported	32			
No Printers Supported	32			
<b>DISPLAY STATION FEATURES</b>				
Screen Size & Type	Various terminals*			
Display Buffer Memory	---			
Format & Capacity	---			
Character Generation	---			
Cursor Positioning	---			
Vertical Scrolling	---			
Horizontal Scrolling	---			
Page Scrolling	---			
Display Highlighting	---			
Character Size Control	---			
Character Pitch Display	---			
Character Spacing Display	---			
Line Spacing Display	---			
Line Justify Display	---			
Underscore Display	---			
Sub/Superscript Display	---			
Multi-Column Page Display	---			
Stored Format Recall/Display	---			
Control Code Display	---			
Format Statement Display	---			
<b>PRINTER STATIONS FEATURES</b>				
Printer Type & Speed	Various models**			
Printer Buffer Memory	---			
Character Pitch/Spacing	---			
Writing Line Width	---			
Carriage Paper Width	---			
First Line Forms Advance	---			
End-Of-Page Stop	---			
Justified Printout	---			
Sub/Superscript Printout	---			
Non-Adjust Printout	---			
Bidirectional Printout	---			
Simultaneous Printout	---			
<b>GEN. FUNCTIONAL FEATURES</b>				
Media-Stored Format	Standard			
Default Format Statement	---			
Stored Multiple Formats	Standard			
Machine Dialog/Menu Prompt	---			
Forms Input	Standard			
Control Character Printout	Standard			
Printout Queuing	Standard			
Revision & Status Reporting	---			
System Security	Document passwords			
<b>TEXT INPUT FEATURES</b>				
Auto Carrier Return	Available			
Auto Word Wraparound	Available			
Auto Margin Adjust	Available			
Temporary Margins	Standard			
Auto Decimal Tab	Available			
Hyphenation	Dictionary + Algorithm			
<b>REMARKS &amp; OTHER FEATURES</b>	<p>*Any display or printer terminal.</p> <p>**Diablo/Qume daisy wheel printers; Selectric printers; line printers</p>			

# Shared-Logic Word Processing Systems

Word Info Systems				COMPANY
Model				MODEL
Text input features				TEXT INPUT FEATURES (cont'd) Auto Input Underline Auto Centering
Auto line spacing				Auto Line Spacing
Auto page numbering				Auto Page Numbering
Auto headers/footers				Auto Headers/Footers
Auto pagination				Auto Pagination
Text edit & merge features				TEXT EDIT & MERGE FEATURES Document Assembly/Merge
Document name				Search Capability
Document name, S, P, Page				Delete Capability
				Global Search & Replace
				Block Move/Copy
				Column Move/Delete
				Auto Repagination
				Auto Widow Adjust
				Auto File Sort
				Auto File Select
				Auto Footnote Tie-In Term Dictionary/Glossary
Serial				COMMUNICATIONS
IBM Corr.; asynchronous; 110 to 300 bauds				Availability Format & Speed
IBM Assembler				ARITHMETIC CAPABILITY EDP CAPABILITY Multiprogramming Compilers
Basic				Applications Software
Additional memory; Additional disk storage; I/O devices				PERIPHERALS
1976				BACKGROUND INFORMATION First Delivery Date Country of Manufacture Installed Base Estimate
1000*				PRICING & TERMS Purchase
				Rental
				Lease
				Maintenance
				Warranty & Support
Disc and tape 32K memory; Terminals and key stations separately.				REMARKS & OTHER FEATURES



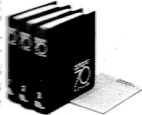
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